

حمل الآن

مجانا وحصريا

المراجعة رقم (1)

الترم الاول



Concept

1.1

The Cell as a System

Evaluation Weeks 1, 2, 3

Q1

Choose the correct answer:

- 1 is considered the building unit of the bodies of living organisms.
a. Nucleus **b.** Oxygen **c.** Cell membrane **d.** The cell
- 2 The allow water to pass to and from the cell.
a. nucleus **b.** cell membrane **c.** cytoplasm **d.** chloroplast
- 3 Which of the following cells is the smallest in size?
a. Plant cells **b.** Bacterial cells
c. Unfertilized bird egg **d.** Animal cell
- 4 maintains the balance of water on both sides of the cell.
a. The nucleus **b.** Ribosomes **c.** Cell membrane **d.** Cell wall
- 5 The cell controls of water balance by passing it through
a. cell wall **b.** cell membrane **c.** nucleus **d.** Mitochondria
- 6 The cell takes the materials it needs and uses them to get
a. waste **b.** energy **c.** matter **d.** food
- 7 contain(s) only one cell.
a. Human body **b.** Plants
c. Unfertilized bird egg **d.** Insect body
- 8 Cells need and to grow and live.
a. carbon dioxide - food **b.** water - wastes
c. oxygen - food **d.** sunlight - wastes
- 9 Which of the following is the smallest system in the human body?
a. System **b.** Tissue **c.** Cell **d.** Organ
- 10 Bacteria are considered organisms.
a. multicellular **b.** a cellular **c.** unicellular **d.** eukaryotic
- 11 The surrounds each cell, protects it and regulates what can enter it.
a. cytoplasm **b.** plasma membrane
c. cell wall **d.** nucleus

- 12 Animal bodies contain a variety of cells, such as
a. muscle cells b. photosynthesis c. guard cells d. chloroplasts
- 13 A group of organs working together represents
a. a system b. a tissue c. a cell d. an organelle
- 14 The is used to see cell components.
a. telescope b. microscope
c. lens d. medical glasses
- 15 Microorganisms are similar to plants in the
a. number of cells b. presence of cells
c. size of cells d. structure of cells
- 16 The organisms made up of only one cell, such as
a. bacteria b. plants c. animals d. insects
- 17 The organisms made up of more than one cell, such as
a. plants b. bacteria
c. unfertilized bird egg d. b and c
- 18 is inside the membrane and supports the organelles.
a. Plasma membrane b. Cytoplasm
c. Nucleus d. Chloroplast
- 19 and are responsible for transporting different materials in cell.
a. Plasma membrane and cytoplasm
b. Nucleus and chloroplast
c. Golgi apparatus and endoplasmic reticulum
d. Cell wall and chloroplast
- 20 The surrounds plant cells to give them a definite shape.
a. cell wall b. chloroplast
c. mitochondrion d. plasma membrane
- 21 The bodies of animals are characterized by the presence of special structures that help them keep their shape, such as
a. skin b. bones c. intestines d. exoskeleton

- 22 One of the components of a cell that similar to an electrical power station is
 a. nucleus b. cytoplasm c. chloroplasts a. mitochondria
- 23 One of the components of the cell prepares and packages materials within the cell and transports them out of the cell is
 a. vacuole b. Golgi apparatus
 c. mitochondria d. cell wall
- 24 A component of the cell that is characterized by its ability to store nutrients, water, and waste is
 a. vacuole b. cytoplasm c. mitochondria d. chloroplast
- 25 contains the pigment chlorophyll, which helps it absorb the energy of sunlight to carry out the photosynthesis process.
 a. Nucleus b. Chloroplast c. Mitochondria d. Cytoplasm
- 26 is considered the main control center in the cell.
 a. Nucleus b. Chloroplast
 c. Golgi apparatus d. Atom
- 27 A type of cell that contains a cell wall and chloroplast is
 a. An animal cell b. a plant cell c. bacteria d. a human cell
- 28 The plant cell is distinguished from the animal cell in that it contains which gives it a definite shape.
 a. cell membrane b. cell wall
 c. vacuole d. chloroplast

Q2

Put (✓) or (X):

- | | |
|---|-----|
| 1 Humans' red blood cells contain a nucleus. | () |
| 2 New cells come from existing cells. | () |
| 3 All cells have a cell wall. | () |
| 4 The number of cells is similar in plants and animals. | () |
| 5 Each cell is surrounded by a plasma membrane that protects it and regulates what can enter. | () |
| 6 Tissue is made up of a group of organs. | () |

- 7 The cell nucleus is responsible for cell division. ()
- 8 The size of the vacuole differs between the plant cell and the animal cell. ()
- 9 The plant cell is distinguished from the animal cell by the presence of chloroplasts and a cell wall. ()
- 10 An animal cell is similar to a plant cell in shape and structure. ()
- 11 One of the functions of the endoplasmic reticulum is helping in assembling proteins. ()
- 12 Plant cells are similar to animal cells in the presence of a nucleus. ()
- 13 Plant cells have a cell wall and therefore do not need a cell membrane. ()
- 14 Animals can make their own food because of the presence of chloroplasts inside their cells. ()

Q3**Write the scientific term (Write what the following statement refers to):**

- 1 It is a tool used to see the components of the cell. (.....)
- 2 It is the building unit of life on Earth. (.....)
- 3 It is the powerhouse of the cell. (.....)
- 4 It is a structure within the cell that has a special function. (.....)
- 5 It is the membrane that allows water to enter and leave the cell. (.....)
- 6 It is the organelle responsible for controlling cell activities, such as making cell proteins. (.....)
- 7 It is the gelatinous liquid inside the cells and supports the cell organelles. (.....)
- 8 It is the process of using oxygen to obtain chemical energy from food so that cells can continue their function. (.....)
- 9 They are living organisms with more than one cell. (.....)
- 10 It is a group of tissues jointed together and involved in performing a particular function. (.....)

- 11 They are structures within the cell that have a special function.
(.....)
- 12 When examining transparent, colorless cells under a microscope, we used stain.
(.....)
- 13 They are organelles that help in assembling and transporting proteins to build and repair the cell.
(.....)
- 14 Sac-like structures used for storage of nutrients, water, and waste; in plant cells.
(.....)
- 15 It is the organelle that packages materials within the cells and transports them out of the cell.
(.....)

Q4

Complete the following sentences:

- 1 Living organisms grow and reproduce by increasing the of their cells.
- 2 The cells of are smaller than plant and animal cells.
- 3 The was the first person to use the word cell.
- 4 Unfertilized bird egg contains cell
- 5 The cell wall of a plant cell is made of
- 6 The specialized types of plant cells perform the process.
- 7 The insects have a hard, shell-like covering called an
- 8 The green color in a plant cell is due to it containing pigment.

Q5

Give reasons for (State the scientific reason):

- 1 The cell membrane maintains the balance of water on both sides of the cell.
.....
- 2 The number of cells in the body of an adult is much greater than the number of cells in the body of the young child.
.....
- 3 A microscope is used to see cells.
.....
.....

- 4 The cell needs energy in the form of food and oxygen.
.....
- 5 The mitochondria are the powerhouses of the cell.
.....
- 6 It is possible to distinguish between plant cells and animal cells by a microscope.
.....
- 7 The cell membrane has the property of being selectively permeable.
.....
- 8 The cell membrane plays a main role in maintaining the cell.
.....
.....
- 9 Plants can make their own food.
.....
.....
- 10 The plant cell has a definite shape, while the animal cell does not.
.....
- 11 Animals cannot make their own food.
.....

Q6**What happens if:**

- 1 Too much water enters the cell?
.....
- 2 The microscope was not invented (discovered)?
.....
.....
- 3 There is no nucleus inside the cell?
.....
- 4 There is no cell membrane?
.....

5 There is no chloroplast in the plant cell?

.....

6 There is no vacuole in the plant cell?

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.....

7 There are no mitochondria inside the cell?

.....

8 There is no cytoplasm inside the cell?

.....

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9 There is no endoplasmic reticulum in the plant cell?

.....

Q7 Explain what is meant by cellular respiration.

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Q8 Explain the difference between unicellular and multicellular organisms.

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Q9 What does the picture in front of you indicate?

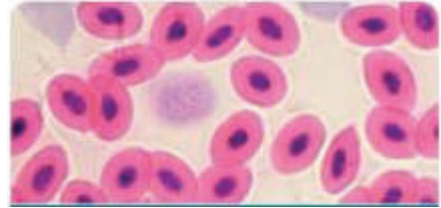
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Q10

What does the picture in front of you indicate?

.....



Q11

Explain what is meant by selectively permeable.

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Concept

1.2

The Body as a System

Evaluation Weeks 4,5,6

Q1

Choose the correct answer:

- 1 Muscle cells need to be shaped like fibers.
a. short **b.** long **c.** fatty **d.** soft
- 2 The coordinates the needed movements to muscles.
a. blood **b.** lung **c.** brain **d.** heart
- 3 The system receives signals from the body's organs, such as the eye.
a. nervous **b.** muscular **c.** respiratory **d.** digestive
- 4 The heart is one of the organs of the system.
a. nervous **b.** circulatory **c.** digestive **d.** respiratory
- 5 When feeling nervous or exposed to a dangerous situation,
a. each system works separately
b. the systems work together in an integrated system
c. the systems do not interact with each other
d. the nervous system only work
- 6 The process of muscle contraction leads to its length.
a. decrease **b.** increase
c. no change in **d.** no correct answer
- 7 The sends instructions to muscles.
a. heart **b.** brain **c.** arm **d.** lung
- 8 Performing simple movements such as picking up a glass of water over the table. What systems in the human body work together to perform this task?
a. The nervous and circulatory systems
b. The nervous and musculoskeletal systems
c. The nervous, circulatory, and musculoskeletal systems
d. The digestive and circulatory systems
- 9 The group of similar cells work together to form
a. organ **b.** tissue **c.** system **d.** organelle

- 10 secretes enzymes to increase the chemical breakdown of food.
 a. Lungs b. Stomach c. Large intestine d. Kidney
- 11 The liver stores sugar and converts it into
 a. protein b. fat c. starch d. glycogen
- 12 The endocrine glands secrete to help the body perform its function.
 a. hormones b. salts c. proteins d. sugars

Q2 Put (✓) or (X) :

- 1 The brain pumps more blood to muscles during danger. ()
- 2 The two arms move due to the contraction and relaxation of muscles. ()
- 3 Undigested food is stored in the small intestine until it is expelled. ()
- 4 Involuntary muscles move automatically; their movement can't be controlled. ()
- 5 When the diaphragm muscle contracts, the air is expelled out from the lungs. ()
- 6 The circulatory system transports only hormones to all body parts. ()
- 7 The heartbeat slows down when exposed to danger or stress. ()
- 8 When the arm is bent, the front muscle relaxes and the back muscle contracts. ()

Q3 Write the scientific term (Write what the following statement refers to):

- 1 It is the organ that pumps more blood to feed the muscles required for movement. (.....)
- 2 It is the organ that sends instructions to the muscle. (.....)
- 3 It is a system consisting of bones, muscles, ligaments, tendons, and cartilage. (.....)
- 4 They are cells are shaped like long fibers, which allows movement. (.....)
- 5 It is a system that is made up of bones, ligaments, tendons, and cartilage. (.....)

- 6 It is the cell which able to store and use energy quickly. (.....)
- 7 It is a fluid secreted in the mouth that helps digest food. (.....)
- 8 It is a system of organs and tissues that helps the body breathe. (.....)
- 9 It is a muscle that pumps oxygenated blood to every cell. (.....)
- 10 It is a muscular opening at the end of the rectum through which food waste is expelled. (.....)
- 11 It is the main organ of the respiratory system. (.....)
- 12 It is a system that converts complex nutrients into simple substances in the human body. (.....)

Q4

Complete the following sentences:

- 1 The pumps more blood to feed the muscles required for movement.
- 2 The sends instructions to the muscles.
- 3 To pick up a glass of water, the first sees the location of the book.
- 4 Hormones are transmitted to all parts of the body by the
.....
- 5 During inhalation the diaphragm muscle
- 6 Glucose sugar is stored by the and in the form of animal starch.

Q5

Give reasons for (State the scientific reason):

- 1 The human body is considered a system.
.....
.....
- 2 No system in the body can work alone to do a simple task.
.....
- 3 Muscle cells need to be shaped like long fibers.
.....

- 4 Cells must vary in shape and size.

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- 5 The endocrine system plays an important role in the fight-or-flight response.

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- 6 Heart muscle relaxes and contracts.

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- 7 Chewing and breaking down food facilitates the digestion process.

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Q6

What happens if:

- 1 Muscle contracts and relaxes?

.....

- 2 Diaphragm muscle contracts?

.....

- 3 The heart muscle contracts and relaxes?

.....

- 4 You face threat or danger according to your heart beats?

.....

- 5 The front muscle in the upper arm contracts and the back muscle relaxes?

.....

Q7 Write the function of each:

1 Small intestine

.....

.....

.....

2 The respiratory system

.....

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3 The endocrine system

.....

4 The gallbladder

.....

Q8 Identify four body systems that work together when playing a football game:

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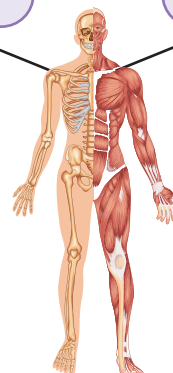
Q9 Determine the two systems in the picture in front of you:

.....

.....

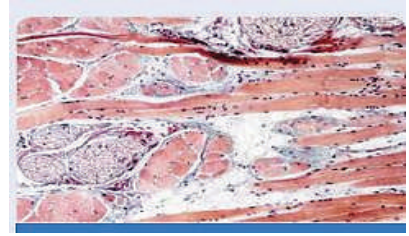
a)

b)

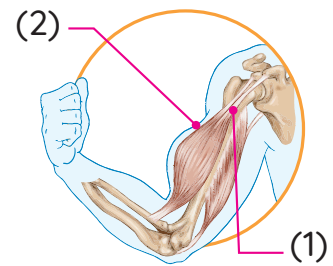


Q10**Determine the name of tissue in the picture in front of you:**

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**Q11****Notice the picture, then complete:**

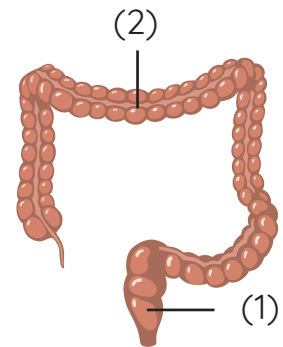
- 1 Muscle number is a relaxed muscle.
- 2 Muscle number is a contracted muscle.

**Q12****Notice the picture, then complete:**

- 1 The number (1) indicates
- 2 The number (2) indicates large
- 3 Write function of number (2).

.....

.....

**Q13****Notice the picture, then complete:**

- 1 The heart is from the system.
- 2 What happens to the heart when the human body is faced with danger?

.....

.....



Q1

Choose the correct answer:

- 1 The electric circuit contains , which is responsible for opening and closing the electric circuit.
 a. a battery b. a switch c. a lamp d. a resistor
- 2 Scientists use a to detect the flow of an electric current.
 a. generator b. galvanometer c. battery d. switch
- 3 A turbine uses the power of wind or water to generate energy to operate electrical generators.
 a. electrical b. mechanical c. solar d. chemical
- 4 is used to slow the flow of an electric current in the electric circuit.
 a. A battery b. A switch c. A resistor d. A lamp
- 5 Electrical wires are coated with a layer of
 a. iron b. aluminum c. plastic d. nickel
- 6 All the following are electric insulators, except
 a. wood b. plastic c. rubber d. copper
- 7 is an example of electrical insulators.
 a. Iron b. Aluminum c. Wood d. Copper
- 8 Magnets can be made from
 a. copper b. glass c. iron d. plastic
- 9 The area around the magnet in which magnetic force appears is a
 a. magnet b. magnetic force
 c. magnetism d. magnetic field
- 10 A magnetic field can be formed when an electric current flows around a
 a. plastic core b. battery
 c. metal core d. rubber core
- 11 The factors on which gravitational force depends are
 a. mass and shape b. size and shape
 c. mass and volume d. distance and mass

- 12 The artificial pacemaker is inserted into the of the human body.
 a. legs b. chest c. neck d. brain
- 13 The artificial pacemaker helps patients who suffer from
 a. kidney failure b. diabetes
 c. headaches d. irregular heartbeats

Q2 Put (✓) or (X):

- 1 In series circuits, the electric current can flow in different branches. ()
- 2 The electric devices in houses are connected in series circuits. ()
- 3 When a light bulb connected in a series burns out, all the other light bulbs are turned off. ()
- 4 Electricity is considered a form of energy. ()
- 5 Water in dams is used to operate wind turbines. ()
- 6 The switch is the source of electricity in an electric circuit. ()
- 7 When placing an insulator in the electric circuit, electricity flows. ()
- 8 Electrical resistors are found in some devices, such as electric stoves. ()
- 9 Copper, aluminum, and rubber are electric conductors. ()
- 10 An electric shock happens when touching a non-insulated wire that an electric current flows through. ()
- 11 A metallic spoon is an electric conductor. ()
- 12 Electricity and magnetism are related to each other. ()
- 13 An electric current is generated when a static magnet is placed inside a coil. ()
- 14 A magnet attracts all materials. ()
- 15 The natural pacemaker inside our heart produces electrical currents to make it contract. ()

Q3 Correct the underlined words:

- 1 Gravity is the force by which a magnet attracts some materials. (.....)

- 2 Magnetism is a pulling or pushing force, while gravity is a pushing force only. (.....)
- 3 Non-metals allow electric current to flow through them. (.....)
- 4 Water in dams is used to operate wind turbines. (.....)
- 5 Electricity can flow through electric insulators. (.....)
- 6 Scientists use a generator to detect the flow of small electric currents. (.....)
- 7 Electric wires are made of plastic and conduct electricity. (.....)

Q4 Write the scientific term:

- 1 It is a tool that is used to open and close the electric circuit. (.....)
- 2 They are the components of an electric circuit that are used to limit the flow of electricity through the circuit. (.....)
- 3 It is a device for generating electricity by using magnets. (.....)
- 4 They are materials that are attracted to the magnet. (.....)
- 5 They are materials that are not attracted to the magnet. (.....)
- 6 It is the area around the magnet in which its magnetic force appears. (.....)
- 7 It is the pattern formed by iron filings near the magnet. (.....)
- 8 It is the flow of electric charges along a closed path. (.....)
- 9 It is the force of Earth which attracts all objects on its surface to its center. (.....)
- 10 They are materials that allow the electric charges to flow through. (.....)
- 11 They are two factors that affect the force of gravity. (.....)
- 12 It is a battery-operated device that is inserted into the chest to regulate heartbeat. (.....)
- 13 It is a type of electric circuits that are found in houses and help in operating many devices at the same time. (.....)

- 14 They are materials that don't allow electrons to flow through them easily. (.....)
- 15 They are materials that allow electrons to flow through them easily. (.....)
- 16 They are small electric charges moving in the wires in a closed electrical circuit. (.....)
- 17 It is a device inserted into the chest that stimulates the heart to beat regularly. (.....)

Q5**Complete the following sentences:**

- 1 Electric circuits in houses are connected in a way.
- 2 An electric circuit contains a, which is responsible for opening and closing the circuit.
- 3 Electric wires are coated by as it is an electric insulator.
- 4 Rubber is an electric, while copper is an electric
- 5 Generators change energy into energy.
- 6 Wind turbines need the to produce electricity.
- 7 Electric energy transfers to the devices that are powered by electricity through
- 8 A moving magnet inside a coiled wire can generate an
- 9 By increasing the number of loops in the coil, and moving a magnet inside it, the amount of generated electric current will
- 10 A magnet can be made of and other materials.
- 11 Gold and copper are considered materials as they are not attracted to the magnet.

Q6 Cross out the odd word:

- 1 Iron – Nickel – Aluminum – Cobalt (.....)
- 2 Battery – Magnet – Wire – Light bulb (.....)

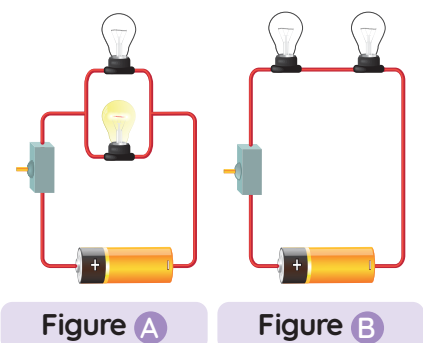
Q7 Classify the following materials in the table below:

(Wooden clip – Metallic paperclip – Plastic spoon – Piece of glass –
Copper wire – Iron nail)

Magnetic Materials	Non-magnetic Materials
.....	
.....	

Q8 Answer the following questions

- 1 The figure that represents the way of connecting devices in houses is
- 2 Mention the components of the electric circuit.
.....
.....
- 3 Define electric conductors.
.....



Q9 Give reasons for:

- 1 The electric circuit is considered a system.
.....
.....
- 2 Wood and copper are not attracted to the magnet.
.....
- 3 Cobalt and nickel are considered magnetic materials.
.....

- 4 Most electric wires are covered with rubber or plastic.
- 5 The electric circuit must contain a battery.
- 6 Electric generators have a great importance in our lives.
- 7 When a ball is thrown into the air, it will stop moving upward and then fall down.
- 8 Gravity and magnetism are different from the other forces.
- 9 The heart has a natural pacemaker.
- 10 Many devices, such as toasters, microwaves, and electric stoves, contain resistors.
- 11 Some electric circuits contain electric resistors.
- 12 In the parallel circuit, we can turn off or remove one light bulb while the other light bulbs remain lit.
- 13 Some electric circuits contain electric resistors.

14 The human body is considered an electric conductor.

.....

.....

15 All metals are considered electric conductors.

.....

Q10

What happens if:

1 Large magnets spin at a high speed around coiled wires?

.....

2 The switch is turned on in the electric circuit?

.....

.....

3 The switch is turned off in the electric circuit?

.....

.....

4 An electric circuit doesn't contain a switch?

.....

5 The mass of an object increases?

.....

6 The distance between an object and the Earth's center increases?

.....

7 The distance between objects and the center of the Earth decreases?

.....

8 A magnet is approached close to some iron nails mixed with small pieces of paper?

.....

.....

9 A magnet is moved inside a coil of wire in a circuit containing a galvanometer?

.....

.....

10 Aluminum foil is used to wrap electric wires?

.....

.....

11 Electric circuits in houses are connected in series?

.....

12 When a piece of wood is replaced by a piece of aluminum in an electrical circuit?

.....

13 A person touches a non-insulated electric wire through which an electric current passes?

.....

.....

14 A patient has slow or irregular heartbeats?

.....

.....

Concept

2.1

Thermal Energy and States of Matter

Evaluation Weeks 10,11

Q1

Choose the correct answer:

- 1 Changing from a gaseous state to a liquid state is called
a. melting b. evaporation c. condensation d. freezing
- 2 When wax melts, its particles
a. gain thermal energy and speed up
b. gain thermal energy and slow down
c. lose thermal energy and speed up
d. lose thermal energy and slow down
- 3 In which state(s) of matter do the molecules move away from each other?
a. Solid b. Gas
c. Solid and liquid d. Solid and gas
- 4 A molecule is composed of very small particles called
a. cells b. atoms c. mixtures d. compounds
- 5 All these substances are solids, except
a. pens b. balloons c. soup d. ice
- 6 As a result of heat flow through metals, they
a. expand b. contract
c. get smaller d. are not affected
- 7 When a thermometer is placed in a cup of iced water, the liquid inside the thermometer due to its
a. goes down – expansion b. rises up – expansion
c. goes down – contraction d. rises up – contraction
- 8 The spaces between molecules during the melting of solids.
a. decrease b. increase
c. do change d. may increase or decrease
- 9 If a metallic rod of 40 meters length is heated at a high temperature, its length can reach meters after heating.
a. 37 b. 38 c. 39 d. 41

10 Metallic parts of a bridge in different temperatures.

a. expand only

b. expand and contract

c. don't change

d. contract only

Q2 Put (✓) or (X) :

- 1 We can change the shape of glass by heating only. ()
- 2 When ice cubes are heated, they melt. ()
- 3 Gases have variable shape and volume. ()
- 4 By decreasing the temperature, the motion speed of molecules of matter decreases. ()
- 5 Hot water molecules have more kinetic energy than cold water. ()
- 6 The decrease in the volume of matter that occurs when matter is cooled is called expansion. ()
- 7 Expansion joints allow bridges to expand safely. ()
- 8 The spaces between molecules of a substance increase by decreasing the temperature of this substance. ()
- 9 Expansion and contraction of matter occur due to changes in the temperature. ()
- 10 Most bridges are made of steel and concrete. ()

Q3 Write the scientific term (Write what the following statements refer to):

- 1 It is the change of matter from a solid state to a liquid state.
(.....)
- 2 It is the total sum of the kinetic energy of its molecules and its atoms.
(.....)
- 3 It is the change of matter from a gaseous state to a liquid state.
(.....)
- 4 It is the smallest building unit of matter. (.....)
- 5 It is the state of matter that has a fixed volume and shape. (.....)
- 6 It is the increase in the volume of a material as its temperature increases. (.....)

- 7 They are joints between parts of a bridge that allow its expansion without being damaged. (.....)
- 8 It is the decrease in the size of a substance due to decreasing its temperature. (.....)

Q4 Complete the following sentences:

- 1 The boiling point of a substance is the temperature at which a substance changes from into
- 2 The state of matter that has a fixed volume and shape is the state.
- 3 The energy is related to the motion of particles of a matter.
- 4 Changing ice into water followed by changing water into steam shows two different processes, which are and
- 5 The boiling point of water is than the boiling point of mercury.
- 6 The temperature at which solid changes to liquid is the point.
- 7 The and points are physical properties of matter.
- 8 Temperature is a measure of the energy of the molecules of a substance.
- 9 When the thermal energy of a matter increases, the kinetic energy of its molecules and moves
- 10 The spaces between molecules during the melting of solids.
- 11 When a substance contracts, its volume, while its volume increases when it expands.
- 12 Heat flows from a object to a cool one.
- 13 Heat is one of the forms of
- 14 Examples of thermal conductors materials are and
- 15 Hot food continues to lose heat until its temperature becomes the temperature of the air surrounding it.
- 16 Examples of insulators materials are and

Q5 Cross out the odd word:

- 1 Melting – Freezing – Condensation – Conduction (.....)

- 2 Steam – Ice – Rocks – Glass (.....)
- 3 Water – Milk – Glass – Oil (.....)

Q6**Give reasons for:**

- 1 Ice melts when it is put in a hot cooking pan.

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.....

- 2 Matter may change from one state to another.

.....

.....

- 3 All matter contains thermal energy.

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- 4 Small spaces are left between the railroad tracks.

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Q7**What happens if:**

- 1 You touch a hot cup of tea (according to the transfer of heat)?

.....

.....

- 2 You touch a piece ice (according to the transfer of heat)?

.....

.....

- 3 You heat a piece of butter (according to the change of state)?

.....

.....

- 4 Expansion joints are not included in the design of bridges?

.....

.....

Concept 2.2

Heat Transfer

Evaluation Weeks 12, 13, & 14

Q1

Choose the correct answer:

- 1 If you mix water at two different temperatures, the resulting temperature of the mixture will be
a. 60°C b. 20°C c. 10°C d. 38°C
- 2 The measuring unit of heat is
a. $^{\circ}\text{C}$ b. meters c. grams d. calories
- 3 Heat is transferred through solids by
a. radiation only b. conduction and convection
c. conduction only d. radiation and convection
- 4 is the transfer of heat through liquids and gases.
a. Radiation b. Conduction c. Freezing d. Convection
- 5 Heat is transferred through copper and iron by
a. radiation only b. conduction only
c. conduction and convection d. convection only
- 6 The heat of the Sun reaches the Earth by
a. conduction b. convection c. radiation d. condensation
- 7 When an object stops on the top of a ramp, it stores energy.
a. kinetic b. light c. potential d. sound
- 8 When a car goes down on a ramp, its energy changes to energy.
a. kinetic – potential b. sound – potential
c. potential – kinetic d. light – potential
- 9 Due to the friction between a moving object and a flat road, the moving object changes some energy into energy.
a. kinetic – thermal b. potential – thermal
c. thermal – kinetic d. kinetic – potential

Q2

Put (✓) or (X) :

- 1 Cool objects do not contain any energy inside. ()
- 2 We feel the heat, but we cannot see it. ()
- 3 Heat cannot be lost, only transferred. ()
- 4 The transfer of heat due to the movement of a liquid or gas is called radiation. ()
- 5 Some materials, such as wood, resist the transfer of thermal energy. ()
- 6 Holding your hands in front of a fire to warm them is an example of radiation. ()
- 7 When a substance changes its state, the mass of the substance does not change. ()
- 8 When an object is placed at a high place, it has potential energy. ()
- 9 Studying the chemical structure of any material helps us know its properties. ()
- 10 Steel is made of rocks, sand, and water. ()
- 11 Flexible fabrics are used in making cloth. ()

Q3

Write the scientific term (Write what the following statements refer to):

- 1 It is the energy transferred from a hot object to a cold object. (.....)
- 2 They are materials that resist the transfer of heat energy. (.....)
- 3 They are materials that allow heat to flow through them. (.....)
- 4 It is a condition in which the object temperature is equal to the surrounding environment. (.....)
- 5 It is the transfer of heat due to the movement of a liquid or gas. (.....)
- 6 It is heat that travels through space. (.....)
- 7 It is the transfer of heat when objects are touching. (.....)
- 8 When a substance changes state, the mass of the substance does not change. (.....)

- 9 It is the energy that kinetic energy changes into when a moving object is affected by friction. (.....)
- 10 It is a form of energy stored in an object when it is placed on the top of a ramp. (.....)
- 11 It is a material made of a mixture of iron and other elements. (.....)
- 12 It is a material that consists of sand, limestone, and soda ash. (.....)
- 13 It is a mixture of rocks, sand, and water, which becomes hard after it dries. (.....)

Q4

Complete the following sentences:

- 1 Heat flows from a object to a cool one.
- 2 Heat is one of the forms of
- 3 Thermal conductors materials include and
- 4 Hot food continues to lose heat until its temperature becomes the temperature of the air surrounding it.
- 5 Examples of insulators materials are and
- 6 The handles of cooking ware are made of plastic because it is a
- 7 Heat flows from the object to the surrounding objects.
- 8 Molecules of matter are always in
- 9 When a substance is heated, the kinetic energy of its molecules
- 10 Temperature is a measurement of the of the molecules of matter.
- 11 Thermal energy transfers from one place to another by,, and
- 12 When and, this affects the rate at which heat is transferred.
- 13 Examples of insulators are,, and
- 14 Conduction occurs with objects that are
- 15 Metals, such as and, are good conductors.
- 16 A metal doorknob feels than the wooden door it is on.

- 17 When a substance changes in state, the mass of the substance
- 18 Some materials prevent heat from being transferred, such as
- 19 Friction between a moving car and a road changes its energy into energy.
- 20 Smart clothes can in the dark and keep themselves
- 21 Plastic is made by chemically changing some compounds of
- 22 Glass is a mixture of,, and sodium carbonate.
- 23 Concrete is used as the base of as it is very strong.
- 24 When a toy car is at the top of a slide, it stores energy.
- 25 When a toy car goes down on the slide, its potential energy changes into energy.

Q5

Give reasons for:

- 1 Cookware is made of aluminum.
.....
.....
- 2 We do not feel the thermal energy in cold objects.
.....
.....
- 3 Meteorologists must understand convection and radiation.
.....
- 4 A metal doorknob feels cooler than the wooden door it is on.
.....
- 5 A metal doorknob feels cooler than the wooden door, even though they are both the same temperature.
.....
.....

6 Scientists should study the structure of molecules of different materials.

.....

.....

7 Due to friction force, the tires of a moving car become hot.

.....

.....

8 Smart clothes have many benefits.

.....

.....

Q6

What happens if:

1 A lizard stands on a hot rock?

.....

.....

2 The temperature of a body increases?

.....

.....

3 You lift your face to the Sun?

.....

.....

4 The iron handle is made of metal?

.....

.....

5 We pick up a hot pot with a metal handle?

.....

.....

6 We weigh an ice cube then heat it (according to the mass of ice cube)?

.....

.....

7 Concrete is left to dry?

.....

.....

8 We make a chemical change to some compounds of petroleum?

.....

.....

9 We mix sand, limestone, and soda ash at a high temperature?

.....

.....

Q7**Explain how are the following materials created?**

- 1 Steel:
- 2 Shrink-wrap:
- 3 Plastic:

Q8**Explain what is meant by:**

- 1 Thermal equilibrium:
.....
.....
- 2 Thermal conductors:
.....
- 3 Convection:
.....
.....
- 4 Radiation:
.....
- 5 Law of Conservation of Mass:
.....
.....

Concept

1.1

The Cell as a System

Evaluation Weeks 1, 2, 3

Q1

Choose the correct answer:

- 1 is considered the building unit of the bodies of living organisms.
a. Nucleus b. Oxygen c. Cell membrane d. The cell
- 2 The allow water to pass to and from the cell.
a. nucleus b. cell membrane c. cytoplasm d. chloroplast
- 3 Which of the following cells is the smallest in size?
a. Plant cells b. Bacterial cells
c. Unfertilized bird egg d. Animal cell
- 4 maintains the balance of water on both sides of the cell.
a. The nucleus b. Ribosomes c. Cell membrane d. Cell wall
- 5 The cell controls of water balance by passing it through
a. cell wall b. cell membrane c. nucleus d. Mitochondria
- 6 The cell takes the materials it needs and uses them to get
a. waste b. energy c. matter d. food
- 7 contain(s) only one cell.
a. Human body b. Plants
c. Unfertilized bird egg d. Insect body
- 8 Cells need and to grow and live.
a. carbon dioxide - food b. water - wastes
c. oxygen - food d. sunlight - wastes
- 9 Which of the following is the smallest system in the human body?
a. System b. Tissue c. Cell d. Organ
- 10 Bacteria are considered organisms.
a. multicellular b. a cellular c. unicellular d. eukaryotic
- 11 The surrounds each cell, protects it and regulates what can enter it.
a. cytoplasm b. plasma membrane
c. cell wall d. nucleus

- 12 Animal bodies contain a variety of cells, such as
 a. muscle cells b. photosynthesis c. guard cells d. chloroplasts
- 13 A group of organs working together represents
 a. a system b. a tissue c. a cell d. an organelle
- 14 The is used to see cell components.
 a. telescope b. microscope
 c. lens d. medical glasses
- 15 Microorganisms are similar to plants in the
 a. number of cells b. presence of cells
 c. size of cells d. structure of cells
- 16 The organisms made up of only one cell, such as
 a. bacteria b. plants c. animals d. insects
- 17 The organisms made up of more than one cell, such as
 a. plants b. bacteria
 c. unfertilized bird egg d. b and c
- 18 is inside the membrane and supports the organelles.
 a. Plasma membrane b. Cytoplasm
 c. Nucleus d. Chloroplast
- 19 and are responsible for transporting different materials in cell.
 a. Plasma membrane and cytoplasm
 b. Nucleus and chloroplast
 c. Golgi apparatus and endoplasmic reticulum
 d. Cell wall and chloroplast
- 20 The surrounds plant cells to give them a definite shape.
 a. cell wall b. chloroplast
 c. mitochondrion d. plasma membrane
- 21 The bodies of animals are characterized by the presence of special structures that help them keep their shape, such as
 a. skin b. bones c. intestines d. exoskeleton

Final Revision

- 22 One of the components of a cell that similar to an electrical power station is
a. nucleus b. cytoplasm c. chloroplasts a. mitochondria
- 23 One of the components of the cell prepares and packages materials within the cell and transports them out of the cell is
a. vacuole b. Golgi apparatus
c. mitochondria d. cell wall
- 24 A component of the cell that is characterized by its ability to store nutrients, water, and waste is
a. vacuole b. cytoplasm c. mitochondria d. chloroplast
- 25 contains the pigment chlorophyll, which helps it absorb the energy of sunlight to carry out the photosynthesis process.
a. Nucleus b. Chloroplast c. Mitochondria d. Cytoplasm
- 26 is considered the main control center in the cell.
a. Nucleus b. Chloroplast
c. Golgi apparatus d. Atom
- 27 A type of cell that contains a cell wall and chloroplast is
a. An animal cell b. a plant cell c. bacteria d. a human cell
- 28 The plant cell is distinguished from the animal cell in that it contains which gives it a definite shape.
a. cell membrane b. cell wall
c. vacuole d. chloroplast

Q2

Put (✓) or (X):

- | | |
|---|-----|
| 1 Humans' red blood cells contain a nucleus. | (X) |
| 2 New cells come from existing cells. | (✓) |
| 3 All cells have a cell wall. | (X) |
| 4 The number of cells is similar in plants and animals. | (X) |
| 5 Each cell is surrounded by a plasma membrane that protects it and regulates what can enter. | (✓) |
| 6 Tissue is made up of a group of organs. | (X) |

- 7 The cell nucleus is responsible for cell division. (✓)
- 8 The size of the vacuole differs between the plant cell and the animal cell. (✓)
- 9 The plant cell is distinguished from the animal cell by the presence of chloroplasts and a cell wall. (✓)
- 10 An animal cell is similar to a plant cell in shape and structure. (X)
- 11 One of the functions of the endoplasmic reticulum is helping in assembling proteins. (✓)
- 12 Plant cells are similar to animal cells in the presence of a nucleus. (✓)
- 13 Plant cells have a cell wall and therefore do not need a cell membrane. (X)
- 14 Animals can make their own food because of the presence of chloroplasts inside their cells. (X)

Q3

Write the scientific term (Write what the following statement refers to):

- 1 It is a tool used to see the components of the cell. (Microscope)
- 2 It is the building unit of life on Earth. (cell)
- 3 It is the powerhouse of the cell. (Mitochondria)
- 4 It is a structure within the cell that has a special function. (Organelle)
- 5 It is the membrane that allows water to enter and leave the cell. (cell membrane)
- 6 It is the organelle responsible for controlling cell activities, such as making cell proteins. (Nucleus)
- 7 It is the gelatinous liquid inside the cells and supports the cell organelles. (Cytoplasm)
- 8 It is the process of using oxygen to obtain chemical energy from food so that cells can continue their function. (Cellular respiration)
- 9 They are living organisms with more than one cell. (Multicellular organisms)
- 10 It is a group of tissues jointed together and involved in performing a particular function. (Organ)

- 11 They are structures within the cell that have a special function.
(**Organelles**)
- 12 When examining transparent, colorless cells under a microscope, we used stain.
(**methylene blue dye**)
- 13 They are organelles that help in assembling and transporting proteins to build and repair the cell.
(**Endoplasmic reticulum**)
- 14 Sac-like structures used for storage of nutrients, water, and waste; in plant cells.
(**sap vacuoles**)
- 15 It is the organelle that packages materials within the cells and transports them out of the cell.
(**Golgi apparatus**)

Q4

Complete the following sentences:

- 1 Living organisms grow and reproduce by increasing the **number** of their cells.
- 2 The cells of **bacteria** are smaller than plant and animal cells.
- 3 The **Robert Hooke** was the first person to use the word cell.
- 4 Unfertilized bird egg contains **(1)** cell
- 5 The cell wall of a plant cell is made of **cellulose**.
- 6 The specialized types of plant cells perform the **photosynthesis** process.
- 7 The insects have a hard, shell-like covering called an **exoskeleton**.
- 8 The green color in a plant cell is due to it containing **chlorophyll** pigment.

Q5

Give reasons for (State the scientific reason):

- 1 The cell membrane maintains the balance of water on both sides of the cell.
Due to the presence of a cell membrane.
- 2 The number of cells in the body of an adult is much greater than the number of cells in the body of the young child.
Because as we grow, the cells increase in number, not in size.
- 3 A microscope is used to see cells.
Because it can magnify the cells to see their structures, as cells can't be seen by the naked eye.

- 4 The cell needs energy in the form of food and oxygen.
To carry out all its life activities to survive and get rid of waste materials.
- 5 The mitochondria are the powerhouses of the cell.
Because mitochondria provide the cell with the needed energy.
- 6 It is possible to distinguish between plant cells and animal cells by a microscope.
Due to the presence of a cell wall and chloroplast in plant cells only.
- 7 The cell membrane has the property of being selectively permeable.
To control the substances that can enter or leave the cell.
- 8 The cell membrane plays a main role in maintaining the cell.
Because it controls what can enter and leave the cell and keeps water balance.
- 9 Plants can make their own food.
Because it contains chloroplasts that help in making the photosynthesis process.
- 10 The plant cell has a definite shape, while the animal cell does not.
Due to the presence of a cell wall in plant cells only.
- 11 Animals cannot make their own food.
Due to the absence of chloroplasts in the animal cell.

Q6**What happens if:**

- 1 Too much water enters the cell?
The cell will swell until it bursts.
- 2 The microscope was not invented (discovered)?
Scientists could not discover more information about the tiny particles of cells.
- 3 There is no nucleus inside the cell?
The cell cannot form protein or be divided.
- 4 There is no cell membrane?
The cell cannot control the substances that enter or leave it.

- 5 There is no chloroplast in the plant cell?

It cannot make its food as it cannot make the photosynthesis process.

- 6 There is no vacuole in the plant cell?

It cannot store nutrients, water and waste materials inside the plant cell.

- 7 There are no mitochondria inside the cell?

The cell cannot get its needed energy.

- 8 There is no cytoplasm inside the cell?

Organelles cannot float inside the cell and cannot transfer materials inside it.

- 9 There is no endoplasmic reticulum in the plant cell?

The protein can't build and repair the damaged cells.

Q7

Explain what is meant by cellular respiration.

It is the process that takes place inside the mitochondria, where oxygen is used to obtain the chemical energy stored in food to help the cells make their functions.

Q8

Explain the difference between unicellular and multicellular organisms.

Unicellular organisms: They are living organisms that their bodies consist of one cell only.

Multicellular organisms: They are living organisms that their bodies consist of many cells.

Q9

What does the picture in front of you indicate?

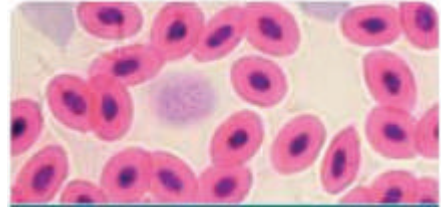
Plant cells



Q10

What does the picture in front of you indicate?

An animal cell



Q11

Explain what is meant by selectively permeable.

It is a feature that the cell membrane allows some substances to enter or leave according to its needs.

Concept

1.2

The Body as a System

Evaluation Weeks 4,5,6

Q1

Choose the correct answer:

- 1 Muscle cells need to be shaped like fibers.
a. short b. long c. fatty d. soft
- 2 The coordinates the needed movements to muscles.
a. blood b. lung c. brain d. heart
- 3 The system receives signals from the body's organs, such as the eye.
a. nervous b. muscular c. respiratory d. digestive
- 4 The heart is one of the organs of the system.
a. nervous b. circulatory c. digestive d. respiratory
- 5 When feeling nervous or exposed to a dangerous situation,
a. each system works separately
b. the systems work together in an integrated system
c. the systems do not interact with each other
d. the nervous system only work
- 6 The process of muscle contraction leads to its length.
a. decrease b. increase
c. no change in d. no correct answer
- 7 The sends instructions to muscles.
a. heart b. brain c. arm d. lung
- 8 Performing simple movements such as picking up a glass of water over the table. What systems in the human body work together to perform this task?
a. The nervous and circulatory systems
b. The nervous and musculoskeletal systems
c. The nervous, circulatory, and musculoskeletal systems
d. The digestive and circulatory systems
- 9 The group of similar cells work together to form
a. organ b. tissue c. system d. organelle

- 10 secretes enzymes to increase the chemical breakdown of food.
 a. Lungs b. Stomach c. Large intestine d. Kidney
- 11 The liver stores sugar and converts it into
 a. protein b. fat c. starch d. glycogen
- 12 The endocrine glands secrete to help the body perform its function.
 a. hormones b. salts c. proteins d. sugars

Q2 Put (✓) or (X) :

- 1 The brain pumps more blood to muscles during danger. (✓)
- 2 The two arms move due to the contraction and relaxation of muscles. (✓)
- 3 Undigested food is stored in the small intestine until it is expelled. (X)
- 4 Involuntary muscles move automatically; their movement can't be controlled. (✓)
- 5 When the diaphragm muscle contracts, the air is expelled out from the lungs. (✓)
- 6 The circulatory system transports only hormones to all body parts. (X)
- 7 The heartbeat slows down when exposed to danger or stress. (X)
- 8 When the arm is bent, the front muscle relaxes and the back muscle contracts. (X)

Q3 Write the scientific term (Write what the following statement refers to):

- 1 It is the organ that pumps more blood to feed the muscles required for movement. (Heart)
- 2 It is the organ that sends instructions to the muscle. (Brain)
- 3 It is a system consisting of bones, muscles, ligaments, tendons, and cartilage. (Musculoskeletal system)
- 4 They are cells are shaped like long fibers, which allows movement. (Muscle cell)
- 5 It is a system that is made up of bones, ligaments, tendons, and cartilage. (Musculoskeletal system)

- 6 It is the cell which able to store and use energy quickly. (Muscle cell)
- 7 It is a fluid secreted in the mouth that helps digest food. (Saliva)
- 8 It is a system of organs and tissues that helps the body breathe. (Respiratory system)
- 9 It is a muscle that pumps oxygenated blood to every cell. (Heart)
- 10 It is a muscular opening at the end of the rectum through which food waste is expelled. (Anus)
- 11 It is the main organ of the respiratory system. (Lung)
- 12 It is a system that converts complex nutrients into simple substances in the human body. (Digestive system)

Q4

Complete the following sentences:

- 1 The heart pumps more blood to feed the muscles required for movement.
- 2 The brain sends instructions to the muscles.
- 3 To pick up a glass of water, the eye first sees the location of the book.
- 4 Hormones are transmitted to all parts of the body by the circulatory system.
- 5 During inhalation the diaphragm muscle contracts.
- 6 Glucose sugar is stored by the liver and muscle in the form of animal starch.

Q5

Give reasons for (State the scientific reason):

- 1 The human body is considered a system.
Because all systems in the human body work together to do specific functions.
- 2 No system in the body can work alone to do a simple task.
Because all systems depend on each other to do their functions.
- 3 Muscle cells need to be shaped like long fibers.
To allow the movement.

- 4 Cells must vary in shape and size.

Because each type of cell must be specialized to perform a specific function.

- 5 The endocrine system plays an important role in the fight-or-flight response.

Because the endocrine system secretes hormones that control this response and affect other body systems to face that danger or to run away from it, such as:

- Contraction of muscles.
- Increasing the breathing rate.
- Increasing the heartbeats.

- 6 Heart muscle relaxes and contracts.

To allow the heart to pump the blood carrying oxygen to all the body cells.

- 7 Chewing and breaking down food facilitates the digestion process.

To convert the complex food into simpler substances that the body can use for energy and growth.

Q6

What happens if:

- 1 Muscle contracts and relaxes?

It causes body to move.

- 2 Diaphragm muscle contracts?

The lungs take in the air rich in oxygen gas

- 3 The heart muscle contracts and relaxes?

To allow the heart pumps the blood carrying oxygen to all the body cells.

- 4 You face threat or danger according to your heart beats?

Heartbeats increase to pump more blood

- 5 The front muscle in the upper arm contracts and the back muscle relaxes?

The elbow will be bend.

Q7 Write the function of each:

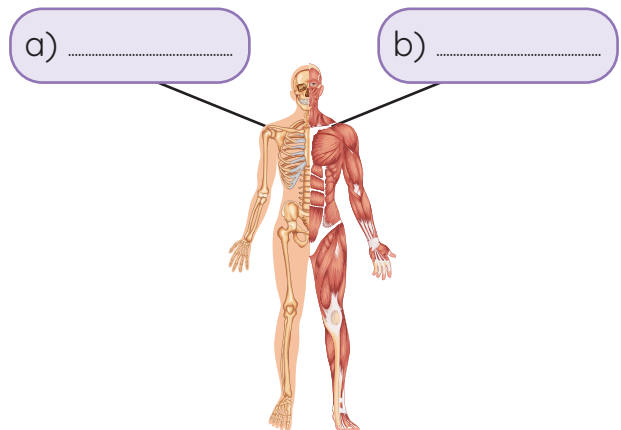
- 1 Small intestine
 - It continues its chemical breakdown of food with the help of enzymes secreted into it from the pancreas and gallbladder.
 - The wall of the small intestine absorbs nutrients through blood vessels to carry them to all the body parts.
- 2 The respiratory system
 - It provides the body with oxygen gas and gets rid of carbon dioxide gas.
- 3 The endocrine system
 - It controls the body temperature and the blood pressure.
- 4 The gallbladder
 - It secretes enzymes in the small intestine to break down food.

Q8 Identify four body systems that work together when playing a football game:

Nervous system - Circulatory system - Musculoskeletal system

Q9 Determine the two systems in the picture in front of you:

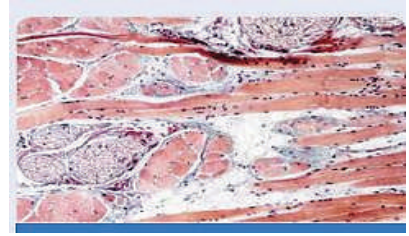
- a. Skeletal system.
- b. Muscular system.



Q10

Determine the name of tissue in the picture in front of you:

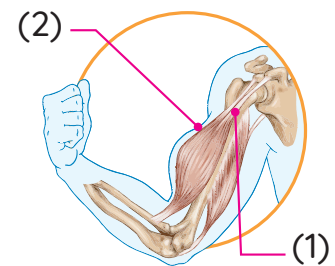
Muscular tissue



Q11

Notice the picture, then complete:

- 1 Muscle number (1) is a relaxed muscle.
- 2 Muscle number (2) is a contracted muscle.

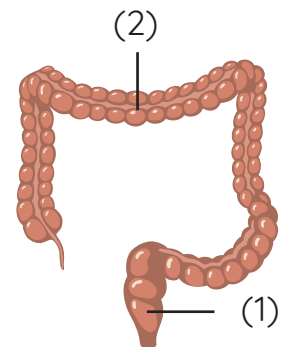


Q12

Notice the picture, then complete:

- 1 The number (1) indicates rectum.
- 2 The number (2) indicates large intestine.
- 3 Write function of number (2).

It absorbs most of water from the undigested food.



Q13

Notice the picture, then complete:

- 1 The heart is from the circulatory system.
- 2 What happens to the heart when the human body is faced with danger?

Heartbeats increase to pump more blood.



Concept

1.3

Energy a System

Evaluation Weeks 7,8,9

Q1

Choose the correct answer:

- 1 The electric circuit contains , which is responsible for opening and closing the electric circuit.
a. a battery b. a switch c. a lamp d. a resistor
- 2 Scientists use a to detect the flow of an electric current.
a. generator b. galvanometer c. battery d. switch
- 3 A turbine uses the power of wind or water to generate energy to operate electrical generators.
a. electrical b. mechanical c. solar d. chemical
- 4 is used to slow the flow of an electric current in the electric circuit.
a. A battery b. A switch c. A resistor d. A lamp
- 5 Electrical wires are coated with a layer of
a. iron b. aluminum c. plastic d. nickel
- 6 All the following are electric insulators, except
a. wood b. plastic c. rubber d. copper
- 7 is an example of electrical insulators.
a. Iron b. Aluminum c. Wood d. Copper
- 8 Magnets can be made from
a. copper b. glass c. iron d. plastic
- 9 The area around the magnet in which magnetic force appears is a
a. magnet b. magnetic force
c. magnetism d. magnetic field
- 10 A magnetic field can be formed when an electric current flows around a
a. plastic core b. battery
c. metal core d. rubber core
- 11 The factors on which gravitational force depends are
a. mass and shape b. size and shape
c. mass and volume d. distance and mass

- 12 The artificial pacemaker is inserted into the of the human body.
 a. legs b. chest c. neck d. brain
- 13 The artificial pacemaker helps patients who suffer from
 a. kidney failure b. diabetes
 c. headaches d. irregular heartbeats

Q2 Put (✓) or (X):

- 1 In series circuits, the electric current can flow in different branches. (X)
- 2 The electric devices in houses are connected in series circuits. (X)
- 3 When a light bulb connected in a series burns out, all the other light bulbs are turned off. (✓)
- 4 Electricity is considered a form of energy. (✓)
- 5 Water in dams is used to operate wind turbines. (X)
- 6 The switch is the source of electricity in an electric circuit. (X)
- 7 When placing an insulator in the electric circuit, electricity flows. (X)
- 8 Electrical resistors are found in some devices, such as electric stoves. (✓)
- 9 Copper, aluminum, and rubber are electric conductors. (X)
- 10 An electric shock happens when touching a non-insulated wire that an electric current flows through. (✓)
- 11 A metallic spoon is an electric conductor. (✓)
- 12 Electricity and magnetism are related to each other. (✓)
- 13 An electric current is generated when a static magnet is placed inside a coil. (X)
- 14 A magnet attracts all materials. (X)
- 15 The natural pacemaker inside our heart produces electrical currents to make it contract. (✓)

Q3 Correct the underlined words:

- 1 Gravity is the force by which a magnet attracts some materials. (Magnetism)

- 2 Magnetism is a pulling or pushing force, while gravity is a pushing force only. (pulling)
- 3 Non-metals allow electric current to flow through them. (Metals)
- 4 Water in dams is used to operate wind turbines. (water turbines)
- 5 Electricity can flow through electric insulators. (electric conductors)
- 6 Scientists use a generator to detect the flow of small electric currents. (galvanometer)
- 7 Electric wires are made of plastic and conduct electricity. (copper)

Q4

Write the scientific term:

- 1 It is a tool that is used to open and close the electric circuit. (Switch)
- 2 They are the components of an electric circuit that are used to limit the flow of electricity through the circuit. (Resistors)
- 3 It is a device for generating electricity by using magnets. (Generator)
- 4 They are materials that are attracted to the magnet. (Magnetic materials)
- 5 They are materials that are not attracted to the magnet. (Non-magnetic materials)
- 6 It is the area around the magnet in which its magnetic force appears. (Magnetic field)
- 7 It is the pattern formed by iron filings near the magnet. (Magnetic field)
- 8 It is the flow of electric charges along a closed path. (Electric current)
- 9 It is the force of Earth which attracts all objects on its surface to its center. (Gravity)
- 10 They are materials that allow the electric charges to flow through. (Electric conductors)
- 11 They are two factors that affect the force of gravity. (Mass and distance)
- 12 It is a battery-operated device that is inserted into the chest to regulate heartbeat. (Artificial pacemaker)
- 13 It is a type of electric circuits that are found in houses and help in operating many devices at the same time. (Parallel circuit)

- 14 They are materials that don't allow electrons to flow through them easily. (Electric insulators)
- 15 They are materials that allow electrons to flow through them easily. (Electric conductors)
- 16 They are small electric charges moving in the wires in a closed electrical circuit. (Electrons)
- 17 It is a device inserted into the chest that stimulates the heart to beat regularly. (Artificial pacemaker)

Q5

Complete the following sentences:

- 1 Electric circuits in houses are connected in a parallel way.
- 2 An electric circuit contains a switch, which is responsible for opening and closing the circuit.
- 3 Electric wires are coated by plastic as it is an electric insulator.
- 4 Rubber is an electric insulator, while copper is an electric conductor.
- 5 Generators change kinetic (mechanical) energy into electrical energy.
- 6 Wind turbines need the kinetic energy of wind to produce electricity.
- 7 Electric energy transfers to the devices that are powered by electricity through wires.
- 8 A moving magnet inside a coiled wire can generate an electric current.
- 9 By increasing the number of loops in the coil, and moving a magnet inside it, the amount of generated electric current will increase.
- 10 A magnet can be made of iron and other materials.
- 11 Gold and copper are considered non-magnetic materials as they are not attracted to the magnet.

Q6 Cross out the odd word:

- 1 Iron – Nickel – Aluminum – Cobalt (Aluminum)
- 2 Battery – Magnet – Wire – Light bulb (Magnet)

Q7 Classify the following materials in the table below:

(Wooden clip – Metallic paperclip – Plastic spoon – Piece of glass –
Copper wire – Iron nail)

Magnetic Materials	Non-magnetic Materials
Metallic paperclip - Iron nail	Wooden clip – Plastic spoon – Piece of glass – Copper wire

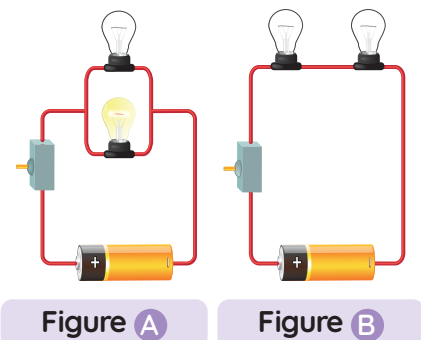
Q8 Answer the following questions

- 1 The figure that represents the way of connecting devices in houses is **figure A**.
- 2 Mention the components of the electric circuit.

A metal wire, a battery, a switch, and an electric device

- 3 Define electric conductors.

They are materials that allow an electric current to flow easily through them.



Q9 Give reasons for:

- 1 The electric circuit is considered a system.
Because the electric circuit consists of many components that work together to make an electric current flow.
- 2 Wood and copper are not attracted to the magnet.
Because wood and copper are non-magnetic materials.
- 3 Cobalt and nickel are considered magnetic materials.
Because cobalt and nickel are attracted to the magnet.

- 4 Most electric wires are covered with rubber or plastic.
To stop the flow of electricity and protect us from the electric shock.
- 5 The electric circuit must contain a battery.
Because the battery is the source of electricity in the electric circuit.
- 6 Electric generators have a great importance in our lives.
Because generators convert kinetic energy into electrical energy, which is used in lighting houses and operating electrical devices.
- 7 When a ball is thrown into the air, it will stop moving upward and then fall down.
Due to gravity, which pulls objects down toward the Earth's center.
- 8 Gravity and magnetism are different from the other forces.
Because magnetism is a pulling or pushing force, while gravity is a pulling force only.
- 9 The heart has a natural pacemaker.
The heart has a natural pacemaker that creates electrical currents, causing the heart to contract.
- 10 Many devices, such as toasters, microwaves, and electric stoves, contain resistors.
To limit the flow of the electric current in the electric circuit and prevent the damage of devices.
- 11 Some electric circuits contain electric resistors.
Because resistors are used to slow the flow of electrons through an electric circuit to avoid damaging its other components.
- 12 In the parallel circuit, we can turn off or remove one light bulb while the other light bulbs remain lit.
Because in a parallel circuit, all light bulbs are connected in different paths (branches); if one bulb is turned off, the other devices continue to work.
- 13 Some electric circuits contain electric resistors.
To limit the flow of the electric current in the electric circuit and prevent the damage of devices.

- 14 The human body is considered an electric conductor.
Because the human body contains a lot of water, which is a good conductor of electricity.
- 15 All metals are considered electric conductors.
Because metals allow electricity to flow through them.

Q10 What happens if:

- 1 Large magnets spin at a high speed around coiled wires?
An amount of electricity is produced and flows through the wires.
- 2 The switch is turned on in the electric circuit?
The electric circuit becomes closed, so the electric current flows through the circuit and the light bulb is turned on.
- 3 The switch is turned off in the electric circuit?
The electric circuit becomes opened, so the electric current doesn't flow through the circuit and the light bulb is turned off.
- 4 An electric circuit doesn't contain a switch?
We can't open or close the electric circuit easily.
- 5 The mass of an object increases?
Gravity (gravitational force) increases.
- 6 The distance between an object and the Earth's center increases?
Gravity (gravitational force) decreases.
- 7 The distance between objects and the center of the Earth decreases?
Gravity (gravitational force) increases.
- 8 A magnet is approached close to some iron nails mixed with small pieces of paper?
The magnet attracts the iron nails, but it does not attract the small pieces of paper.
- 9 A magnet is moved inside a coil of wire in a circuit containing a galvanometer?
The needle of the galvanometer moves and this indicates there is an electric current flow.

- 10 Aluminum foil is used to wrap electric wires?

The electric current will flow through it which causes an electric shock when touching the wires.

- 11 Electric circuits in houses are connected in series?

If one light bulb is disconnected, the other light bulbs do not work.

- 12 When a piece of wood is replaced by a piece of aluminum in an electrical circuit?

The electric current will flow through the closed electric circuit.

- 13 A person touches a non-insulated electric wire through which an electric current passes?

The electric current flows through his body and he will be shocked by electricity.

- 14 A patient has slow or irregular heartbeats?

The patient needs an artificial pacemaker to keep the heart beating correctly.

Concept

2.1

Thermal Energy and States of Matter

Evaluation Weeks 10,11

Q1

Choose the correct answer:

- 1 Changing from a gaseous state to a liquid state is called
a. melting b. evaporation c. condensation d. freezing
- 2 When wax melts, its particles
a. gain thermal energy and speed up
b. gain thermal energy and slow down
c. lose thermal energy and speed up
d. lose thermal energy and slow down
- 3 In which state(s) of matter do the molecules move away from each other?
a. Solid b. Gas
c. Solid and liquid d. Solid and gas
- 4 A molecule is composed of very small particles called
a. cells b. atoms c. mixtures d. compounds
- 5 All these substances are solids, except
a. pens b. balloons c. soup d. ice
- 6 As a result of heat flow through metals, they
a. expand b. contract
c. get smaller d. are not affected
- 7 When a thermometer is placed in a cup of iced water, the liquid inside the thermometer due to its
a. goes down – expansion b. rises up – expansion
c. goes down – contraction d. rises up – contraction
- 8 The spaces between molecules during the melting of solids.
a. decrease b. increase
c. do change d. may increase or decrease
- 9 If a metallic rod of 40 meters length is heated at a high temperature, its length can reach meters after heating.
a. 37 b. 38 c. 39 d. 41

10 Metallic parts of a bridge in different temperatures.

a. expand only

b. **expand and contract**

c. don't change

d. contract only

Q2 Put (✓) or (X) :

- 1 We can change the shape of glass by heating only. (X)
- 2 When ice cubes are heated, they melt. (✓)
- 3 Gases have variable shape and volume. (✓)
- 4 By decreasing the temperature, the motion speed of molecules of matter decreases. (✓)
- 5 Hot water molecules have more kinetic energy than cold water. (✓)
- 6 The decrease in the volume of matter that occurs when matter is cooled is called expansion. (X)
- 7 Expansion joints allow bridges to expand safely. (✓)
- 8 The spaces between molecules of a substance increase by decreasing the temperature of this substance. (X)
- 9 Expansion and contraction of matter occur due to changes in the temperature. (✓)
- 10 Most bridges are made of steel and concrete. (✓)

Q3 Write the scientific term (Write what the following statements refer to):

- 1 It is the change of matter from a solid state to a liquid state.
(**Melting process**)
- 2 It is the total sum of the kinetic energy of its molecules and its atoms.
(**Thermal energy**)
- 3 It is the change of matter from a gaseous state to a liquid state.
(**Condensation**)
- 4 It is the smallest building unit of matter. (**Atom**)
- 5 It is the state of matter that has a fixed volume and shape. (**Solid state**)
- 6 It is the increase in the volume of a material as its temperature increases.
(**Expansion**)

- 7 They are joints between parts of a bridge that allow its expansion without being damaged. (Expansion joints)
- 8 It is the decrease in the size of a substance due to decreasing its temperature. (Contraction)

Q4 Complete the following sentences:

- 1 The boiling point of a substance is the temperature at which a substance changes from liquid into gas.
- 2 The state of matter that has a fixed volume and shape is the solid state.
- 3 The kinetic energy is related to the motion of particles of a matter.
- 4 Changing ice into water followed by changing water into steam shows two different processes, which are melting and evaporation.
- 5 The boiling point of water is less than the boiling point of mercury.
- 6 The temperature at which solid changes to liquid is the melting point.
- 7 The melting and boiling points are physical properties of matter.
- 8 Temperature is a measure of the kinetic energy of the molecules of a substance.
- 9 When the thermal energy of a matter increases, the kinetic energy of its molecules increases and moves faster.
- 10 The spaces between molecules increase during the melting of solids.
- 11 When a substance contracts, its volume decreases, while its volume increases when it expands.
- 12 Heat flows from a hot object to a cool one.
- 13 Heat is one of the forms of energy.
- 14 Examples of thermal conductors materials are iron and aluminum.
- 15 Hot food continues to lose heat until its temperature becomes equal to the temperature of the air surrounding it.
- 16 Examples of insulators materials are plastic and wood.

Q5 Cross out the odd word:

- 1 Melting – Freezing – Condensation – Conduction (Conduction)

2 Steam – Ice – Rocks – Glass

(Steam)

3 Water – Milk – Glass – Oil

(Glass)

Q6

Give reasons for:

1 Ice melts when it is put in a hot cooking pan.

Because ice particles gain thermal energy, so they move faster and spread out, and the state of ice changes into water.

2 Matter may change from one state to another.

Because matter gains or loses thermal energy during heating or cooling.

3 All matter contains thermal energy.

Because any matter consists of particles which are in continuous motion.

4 Small spaces are left between the railroad tracks.

To allow the iron to expand in hot weather without being bent to avoid train accidents.

Q7

What happens if:

1 You touch a hot cup of tea (according to the transfer of heat)?

Heat flows from the hotter substance (hot cup) to the cooler substance (your hand).

2 You touch a piece ice (according to the transfer of heat)?

Heat flows from the hotter substance (your hand) to the cooler substance (ice).

3 You heat a piece of butter (according to the change of state)?

It changes from a solid state to a liquid state.

4 Expansion joints are not included in the design of bridges?

Buckling of bridges occurs due to the expansion of steel when exposed to high temperatures.

Concept 2.2

Heat Transfer

Evaluation Weeks 12, 13, & 14

Q1

Choose the correct answer:

- 1 If you mix water at two different temperatures, the resulting temperature of the mixture will be
a. 60°C b. 20°C c. 10°C d. 38°C
- 2 The measuring unit of heat is
a. °C b. meters c. grams d. calories
- 3 Heat is transferred through solids by
a. radiation only b. conduction and convection
c. conduction only d. radiation and convection
- 4 is the transfer of heat through liquids and gases.
a. Radiation b. Conduction c. Freezing d. Convection
- 5 Heat is transferred through copper and iron by
a. radiation only b. conduction only
c. conduction and convection d. convection only
- 6 The heat of the Sun reaches the Earth by
a. conduction b. convection c. radiation d. condensation
- 7 When an object stops on the top of a ramp, it stores energy.
a. kinetic b. light c. potential d. sound
- 8 When a car goes down on a ramp, its energy changes to energy.
a. kinetic – potential b. sound – potential
c. potential – kinetic d. light – potential
- 9 Due to the friction between a moving object and a flat road, the moving object changes some energy into energy.
a. kinetic – thermal b. potential – thermal
c. thermal – kinetic d. kinetic – potential

Q2 Put (✓) or (X):

- 1 Cool objects do not contain any energy inside. (X)
- 2 We feel the heat, but we cannot see it. (✓)
- 3 Heat cannot be lost, only transferred. (✓)
- 4 The transfer of heat due to the movement of a liquid or gas is called radiation. (X)
- 5 Some materials, such as wood, resist the transfer of thermal energy. (✓)
- 6 Holding your hands in front of a fire to warm them is an example of radiation. (✓)
- 7 When a substance changes its state, the mass of the substance does not change. (✓)
- 8 When an object is placed at a high place, it has potential energy. (✓)
- 9 Studying the chemical structure of any material helps us know its properties. (✓)
- 10 Steel is made of rocks, sand, and water. (✓)
- 11 Flexible fabrics are used in making cloth. (✓)

Q3 Write the scientific term (Write what the following statements refer to):

- 1 It is the energy transferred from a hot object to a cold object.
(Thermal energy)
- 2 They are materials that resist the transfer of heat energy.
(Thermal insulators)
- 3 They are materials that allow heat to flow through them.
(Thermal conductors)
- 4 It is a condition in which the object temperature is equal to the surrounding environment.
(Thermal equilibrium)
- 5 It is the transfer of heat due to the movement of a liquid or gas. (Convection)
- 6 It is heat that travels through space. (Radiation)
- 7 It is the transfer of heat when objects are touching. (Conduction)
- 8 When a substance changes state, the mass of the substance does not change.
(Law of Conservation of Mass)

- 9 It is the energy that kinetic energy changes into when a moving object is affected by friction. (Thermal energy)
- 10 It is a form of energy stored in an object when it is placed on the top of a ramp. (Potential Energy)
- 11 It is a material made of a mixture of iron and other elements. (Steel)
- 12 It is a material that consists of sand, limestone, and soda ash. (Glass)
- 13 It is a mixture of rocks, sand, and water, which becomes hard after it dries. (Concrete)

Q4

Complete the following sentences:

- 1 Heat flows from a hot object to a cool one.
- 2 Heat is one of the forms of energy.
- 3 Thermal conductors materials include iron and aluminum.
- 4 Hot food continues to lose heat until its temperature becomes equal to the temperature of the air surrounding it.
- 5 Examples of insulators materials are plastic and wood.
- 6 The handles of cooking ware are made of plastic because it is a thermal insulator.
- 7 Heat flows from the hotter object to the surrounding objects.
- 8 Molecules of matter are always in continuous motion.
- 9 When a substance is heated, the kinetic energy of its molecules increases.
- 10 Temperature is a measurement of the average kinetic energy of the molecules of matter.
- 11 Thermal energy transfers from one place to another by conduction, convection, and radiation.
- 12 When the difference in temperature between objects and time of contact between objects increases, this affects the rate at which heat is transferred.
- 13 Examples of insulators are wood, plastic, and glass.
- 14 Conduction occurs with objects that are solid.
- 15 Metals, such as iron and aluminum, are good conductors.

- 16 A metal doorknob feels **cooler** than the wooden door it is on.
- 17 When a substance changes in state, the mass of the substance **does not change**.
- 18 Some materials prevent heat from being transferred, such as **plastic**.
- 19 Friction between a moving car and a road changes its **kinetic** energy into **thermal** energy.
- 20 Smart clothes can **light** in the dark and keep themselves **clean**.
- 21 Plastic is made by chemically changing some compounds of **petroleum**.
- 22 Glass is a mixture of **sand**, **limestone**, and sodium carbonate.
- 23 Concrete is used as the base of **buildings** as it is very strong.
- 24 When a toy car is at the top of a slide, it stores **potential** energy.
- 25 When a toy car goes down on the slide, its potential energy changes into **kinetic** energy.

Q5**Give reasons for:**

- 1 Cookware is made of aluminum.
Because aluminum is a thermal conductor that allow heat to transfer through it.
- 2 We do not feel the thermal energy in cold objects.
Because our hands have more thermal energy than the ice, so energy transfers from our hands to cold objects.
- 3 Meteorologists must understand convection and radiation.
To help them predict the weather.
- 4 A metal doorknob feels cooler than the wooden door it is on.
Because heat transfers from your hand to the metal doorknob.
- 5 A metal doorknob feels cooler than the wooden door, even though they are both the same temperature.
Because thermal energy transfers fast from your hand to the metal doorknob, which is a thermal conductor.

- 6 Scientists should study the structure of molecules of different materials.
To understand their chemical structures, which helps in understanding their properties and their suitable uses.
- 7 Due to friction force, the tires of a moving car become hot.
Because some of the kinetic energy changes into thermal energy.
- 8 Smart clothes have many benefits.
Because smart clothes can control body temperature, light up in the dark, and keep themselves clean.

Q6

What happens if:

- 1 A lizard stands on a hot rock?
The skin of the lizard absorbs thermal energy from the rock, so the particles inside the rock lose energy and move slower.
- 2 The temperature of a body increases?
The kinetic energy of the molecules of the body increases.
- 3 You lift your face to the Sun?
You feel warm, as heat transfers to your face through radiation.
- 4 The iron handle is made of metal?
Heat transfers into the handle, so our hands will be burnt.
- 5 We pick up a hot pot with a metal handle?
Heat transfers to our hands, so it will burn.
- 6 We weigh an ice cube then heat it (according to the mass of ice cube)?
The mass does not change.
- 7 Concrete is left to dry?
It becomes hard.
- 8 We make a chemical change to some compounds of petroleum?
Plastic, a new matter that has different properties from petroleum, is formed.
- 9 We mix sand, limestone, and soda ash at a high temperature?
Glass is formed.

Q7

Explain how are the following materials created?

- 1 Steel: **By mixing iron and other materials.**
- 2 Shrink-wrap: **By adding heat to plastic to make it shrink.**
- 3 Plastic: **By making chemical changes on petroleum.**

Q8

Explain what is meant by:

- 1 Thermal equilibrium:

It's the condition where heat stops transferring between two objects in contact when they reach the same temperature.

- 2 Thermal conductors:

They are materials that allow thermal energy to transfer through

- 3 Convection:

It is the transfer of heat due to the movement of particles of a liquid or gas.

- 4 Radiation:

It is the transfer of heat through space or gases.

- 5 Law of Conservation of Mass:

The mass of a substance doesn't change when the substance changes from one state to another.

كيفية طباعة صفحات معينة من ملف معين مثلا ازاي نطبع الصفحات من صفحة 4 الى صفحة 9



حمل الآن

مجاناً وحصرياً

المراجعة رقم (2)

الترم الاول





First term Questions Bank



Question 01

Choose the correct answers

- 1 The cell takes the materials it needs and uses them to get
 (a) waste (b) energy (c) matter
- 2 The organisms made up of more than one cell such as.....
 (a) plant (b) bacteria (c) unfertilized bird egg
- 3 Copper and don't attract to the magnet as they are nonmagnetic materials
 (a) iron (b) cobalt (c) aluminum
- 4 is considered the building unit of the bodies of living organisms.
 (a) The cell (b) Oxygen (c) Cell membrane
- 5 The Organ that secretes Insulin hormone for regulating the level of Sugar is.....
 (a) Pancreas (b) Stomach (c) Liver
- 6 The allow water to pass to and from the cell
 (a) nucleus (b) cell membrane (c) cell wall
- 7 contains only one cell.
 (a) Human body (b) Plants (c) Unfertilized bird egg
- 8 is an organ contains voluntary and involuntary muscles.
 (a) Heart (b) Legs (c) Eye
- 9 Which of the following cells is the smallest in size?
 (a) plant cells (b) Bacterial cells (c) Unfertilized bird egg
- 10 Cells need and to grow and live
 (a) Carbon dioxide - food (b) Water - wastes (c) Oxygen – food
- 11 maintains the balance of water on both sides of the cell.
 (a) The nucleus (b) Cell membrane (c) cell wall



- 12 The heart is one of the organs of..... system.
 (a) Nervous (b) Circulatory (c) digestive
- 13is the smallest basic unit of life.
 (a) The nucleus (b) Cell membrane (c) cell wall
- 14 The..... surrounds each cell, protects it and regulates what can enter it.
 (a) Cytoplasm (b) Golgi apparatus (c) Cell membrane
- 15 Insulin hormone is responsible for regulating the level of in blood
 (a) proteins (b) sugar (c) water
- 16 bacteria are considered organisms...
 (a) multicellular (b) acellular (c) unicellular
- 17 A component of the cell that is characterized by its ability to store nutrients, water, and waste is.....
 (a) vacuole (b) Cytoplasm (c) Mitochondria
- 18 contains the pigment chlorophyll, which helps it absorb the energy of sunlight to carry out the photosynthesis process.
 (a) Nucleus (b) Chloroplast (c) Mitochondria
- 19 Animal bodies contain a variety of cells, such as
 (a) muscle cells (b) Photosynthesis (c) cell wall
- 20 is considered the main control center in the cell.
 (a) Nucleus (b) Chloroplast (c) Golgi apparatus
- 21 A group of organs working together is.....
 (a) systems (b) Tissues (c) Cells
- 22 One of the components of the cell prepares and packages materials within the cell and transports them out of the cell is.....
 (a) vacuole (b) Golgi apparatus (c) Mitochondria
- 23 Theis used to see cell components.
 (a) microscope (b) telescope (c) lens
- 24 One of the components of a cell that similar to an electrical power station is.....
 (a) Mitochondria (b) Cytoplasm (c) Chloroplasts



- 25 Microorganisms are similar to plants in
- (a) Number of cells (b) presence of cells (c) Size of cells
- 26 The bodies of animals are characterized by the presence of special structures that help them keep their shape, such as.....
- (a) Skin (b) Bones (c) Intestines
- 27 secretes enzymes to increase the chemical breakdown of food
- (a) lungs (b) stomach (c) kidney
- 28 A type of cell that contains a cell wall and Chloroplast is.....
- (a) Animal cell (b) Plant cell (c) Bacteria
- 29 The liver stores sugar and converts it into
- (a) protein (b) fat (c) glycogen
- 30 Muscle cells need to be shaped likefibers.
- (a) Short (b) Long (c) Fatty
- 31 The plant cell is distinguished from the animal cell in that it contains which gives it a definite shape.
- (a) Cell membrane (b) Cell wall (c) vacuole
- 32 The process of absorbing nutrients begins through the capillaries in the.....
- (a) stomach (b) esophagus (c) small intestine
- 33 The..... coordinates the needed movements to muscles.
- (a) brain (b) Heart (c) Blood vessels
- 34 The endocrine glands secrete to help the body perform its function.
- (a) hormones (b) salts (c) proteins
- 35 The system receives nervous signals from the body's organs, such as the eye.
- (a) Nervous (b) Muscular (c) Respiratory
- 36 Urea is formed due to the breaking down of inside the body cells
- (a) carbohydrates (b) fats (c) proteins
- 37 The group of similar cells work together to form
- (a) organ (b) tissue (c) system



- 38 The process of muscle contraction leads to..... its length.
 (a) decrease (b) increase (c) no change
- 39 When a piece of aluminum is replaced by a piece of wood in an electrical circuit, this causes
 (a) current flow (b) open the circuit. (c) close the circuit
- 40 Which of the following is a list of components of the body system in order from least complex to most complex?
 (a) Tissue, cell, organ, body system. (b) Cell, tissue, organ, body system. (c) Organ, tissue, cell, body system.
- 41 Nutrients and oxygen enter cell through the
 (a) cell membrane. (b) mitochondria (c) nucleus
- 42 Which of the following structures is found in both plant and animal cells?
 (a) Cell membrane. (b) Cell wall. (c) Chloroplast
- 43 The control center of the cell and is responsible for cell division
 (a) mitochondria (b) nucleus (c) chloroplast
- 44 Which of the following is found in an acacia plant leaf and is not found in human?
 (a) Cell wall. (b) Mitochondria (c) Cytoplasm
- 45 When two muscles work together to carry out a movement, one muscle while the other
 (a) moves - stays still. (b) contracts - relaxes. (c) stays still - relaxes.
- 46 Which of the following muscles is voluntary?
 (a) Stomach muscles. (b) muscles of the esophagus (c) Neck muscles.
- 47 The factors on which gravitational force depends are
 (a) mass and shape (b) size and shape. (c) distance and mass
- 48 The electrical insulating materials include
 (a) rubber (b) iron (c) aluminum
- 49 All the following muscles are considered as voluntary muscles, except muscles of
 (a) Forearm (b) Heart (c) Neck



- are used to stop the flow of electricity.
- 50 ☐ a Resistors ☐ b Electric insulators ☐ c Electric conductors
- All of the following are responsible for excretion process, except
- 51 ☐ a digestive system ☐ b skin ☐ c respiratory system
- Nephrons play an important role in
- 52 ☐ a secreting hormones to control the body functions ☐ b controlling the movement of body from place to another ☐ c filtering the blood from waste materials
- Urination process happens by the help of the system
- 53 ☐ a digestive ☐ b urinary ☐ c respiratory
- Gravity and magnetism are similar in that
- 54 ☐ a they are repulsion forces only ☐ b they are attraction forces only ☐ c we cannot see both of them.
- The area around the magnet in which magnetic force appears is
- 55 ☐ a gravity ☐ b electric conductor ☐ c magnetic field
- The artificial pacemaker is inserted into the of human body.
- 56 ☐ a legs ☐ b chest ☐ c neck
- Scientists use a to detect the flow of electric current.
- 57 ☐ a generator ☐ b galvanometer ☐ c battery
- All the following animals have bones in their bodies, except
- 58 ☐ a dogs ☐ b birds ☐ c insects
- The temperature during melting of a solid
- 59 ☐ a decreases ☐ b increases ☐ c doesn't change.
- Heat will flow from the substance to the one.
- 60 ☐ a hotter - colder ☐ b frozen - melted ☐ c colder - hotter
- The temperature of a substance is defined as the average amount of of the molecules or other particles of a sample of matter.
- 61 ☐ a potential energy ☐ b mass ☐ c kinetic energy



- 62 Objects with more thermal energy have kinetic energy.
 (a) more (b) less (c) the same
- 63 happens as a result of the separation of the particles of a substance when heat is transferred to it.
 (a) Contraction (b) Expansion (c) Growth
- 64 If you want to design a product which conducts heat well, which material will you think of?
 (a) Wood (b) Plastic (c) Metal
- 65 is the transfer of heat due to the movement of a liquid or gas.
 (a) Radiation (b) Conduction (c) Convection
- 66 Raising the temperature of materials can cause
 (a) freezing and expansion (b) melting and expansion (c) melting and contraction
- 67 The point at which molecules in liquid water are heated and separated from each other until they become gas, is called
 (a) melting point (b) freezing point (c) boiling point
- 68 Which energy is generated due to the motion of particles in a certain substance?
 (a) Thermal energy (b) Muscular energy (c) Potential energy
- 69 Which of the following may not be a source of thermal energy?
 (a) Small oven (b) Moon (c) The Sun
- 70 Heat is transferred by convection in the molecules of the following substances, except
 (a) milk (b) water (c) iron
- 71 Sunlight and the heat of the Sun reach Earth by
 (a) conduction (b) radiation (c) convection
- 72 Matter in the liquid state has volume and shape.
 (a) fixed - fixed (b) variable - fixed (c) fixed - variable
- 73 is used to measure the temperature of materials.
 (a) Graduated cylinder (b) Thermometer (c) Measuring tape



- 74 Changing from gas state to liquid state is called.....
- (a) melting (b) evaporation (c) condensation
- 75 As a result of heat flow through metals, they.....
- (a) expand (b) contract (c) get smaller
- 76 The spaces between molecules during the melting of solids.
- (a) decrease (b) increase (c) doesn't change
- 77 Metallic parts of a bridgein different temperatures
- (a) expand and contract (b) expand only (c) contract only
- 78 The molecule is composed of very small particles called.....
- (a) cells (b) atoms (c) mixtures
- 79 All these substances are solids, except
- (a) pen (b) balloon (c) soup
- 80 The measuring unit of heat is called
- (a) calorie (b) kilogram (c) gram
- 81 process is the change of matter from the gas state to the liquid state
- (a) Melting (b) Evaporation (c) Condensation
- 82 In which state(s) of matter are the molecules away from each other?
- (a) Solid (b) Gas (c) Solid and gas
- 83 By heating water its thermal energy
- (a) decreases (b) at the same (c) increases
- 84 Objects with less thermal energy have kinetic energy.
- (a) more (b) less (c) the same
- 85 Change of matter from Liquid state to the gas state is
- (a) Freezing (b) Condensation (c) Evaporation
- 86 If you mix a cup of water with temperature 20°C to another with temperature 60°C , the temperature of the mixture will be
- (a) 60°C (b) 20°C (c) 38°C



- 87 are used to slow down the flow of electricity
 (a) Galvanometer (b) resistors (c) Heat conductors
- 88 is used to slow the flow of an electric current in the electric circuit.
 (a) battery (b) resistor (c) lamp
- 89 If you want to design a product that conducts heat well, you will use
 (a) wood (b) metal (c) plastic
- 90 Both and are examples of liquid matter.
 (a) water – milk (b) water - wood (c) oil - paper
- 91 Water changes into ice by
 (a) Melting (b) Evaporation (c) Freezing
- 92 Temperature is a measure of the energy of molecules of a substance
 (a) kinetic (b) light (c) chemical
- 93 Change of matter from solid state to the liquid state is
 (a) freezing (b) Melting (c) condensation
- 94 The transformation of gas into liquid is called..... process
 (a) melting (b) evaporation (c) condensation
- 95 When the kinetic energy of liquids decreases, they may
 (a) expand (b) contract (c) evaporate
- 96 Railroad tracks are made up of
 (a) glass (b) plastic (c) iron
- 97 When an object stops on the top of a ramp, it stores.....energy.
 (a) Kinetic (b) light (c) potential
- 98 When a car goes down on a ramp, itsenergy changes to..... energy.
 (a) kinetic/ potential (b) sound/potential (c) potential /kinetic
- 99 Due to the friction between a moving object and a flat road, the moving object changes some of energy into energy.
 (a) kinetic/ thermal (b) potential/ thermal (c) thermal /kinetic



Question 02

put (true) or (false)

- 1 The cell nucleus is responsible for cell division. ()
- 2 Tissue are made up of a group of organs. ()
- 3 Involuntary muscles move automatically, their movement can't be controlled. ()
- 4 New cells come from existing cells. ()
- 5 Undigested food is stored in the small intestine until it is expelled. ()
- 6 The brain does not respond when feeling stressed. ()
- 7 The number of cells is similar in plants and animals ()
- 8 The two arms move due to contraction and relaxation muscles. ()
- 9 Muscle cells are short fibers that allow movement, storage and release of energy. ()
- 10 An animal cell is similar to a plant cell in shape and structure. ()
- 11 The plant cell is distinguished from the animal cell by the presence of chloroplasts and a cell wall. ()
- 12 The brain pumps more blood to muscles. ()
- 13 Every plant cell has a cell wall and therefore does not need a cell membrane. ()
- 14 The circulatory system transports only hormones to all body parts. ()
- 15 Each cell is surrounded by a plasma membrane that protects it and regulates what can enter ()
- 16 All cells have a cell wall ()
- 17 Plant cells are similar to animal cell in the presence of a nucleus. ()
- 18 One of the functions of the endoplasmic reticulum is helping in assembling proteins. ()
- 19 Animals can make their own food because of the presence of chloroplasts inside their cells ()
- 20 Human's red blood cells contain a nucleus ()
- 21 One of the functions of the endoplasmic reticulum is helping in assembling proteins. ()
- 22 Cell biologists are scientists who study rocks ()
- 23 Absorption of food occurs in the small intestine ()



- 24 Neck muscles are from voluntary muscles. ()
- 25 Each animal cell has cell wall which is made up of cellulose. ()
- 26 The cell organelles float in the cytoplasm ()
- 27 Tissue consists of a group of similar cells. ()
- 28 Cellular respiration takes place inside cells by golgi apparatus ()
- 29 When the heartbeats increase, the blood pressure decreases ()
- 30 Bacteria and horse are considered as multicellular organisms ()
- 31 Exoskeleton gives some insects their shapes ()
- 32 The forearm moves down when the muscles in the back contract ()
- 33 Mitochondria provide the cell with the needed food ()
- 34 Water and waste materials are stored in vacuole ()
- 35 Chloroplasts are found in the cells of banana plant leaves. ()
- 36 The muscle that helps in moving the eyes in different directions is a voluntary muscle. ()
- 37 The cellular respiration occurs in endoplasmic reticulum. ()
- 38 An animal cell has a definite shape because it has a cell wall. ()
- 39 Digestive system digests food without the help of nervous system. ()
- 40 The acid and enzymes which are secreted inside the stomach lead to more breaking down of food ()
- 41 Nephron helps in the filtration of blood from urea. ()
- 42 Sweat is excreted by the lung ()
- 43 Nephrons are microscopic filters that remove harmful substance from body. ()
- 44 In the parallel circuits, the electric current can flow in one branch. ()
- 45 All electric circuits in our homes are connected in parallel. ()
- 46 Digestion begins when the food enters esophagus ()
- 47 A piece of aluminum foil and a plastic spoon will be attracted to the magnet. ()
- 48 People whose kidneys are not working properly must use other devices to filter their blood from waste ()
- 49 Cobalt is an example of magnetic materials. ()



- 50 The magnetism is a repulsion force only. ()
- 51 All cells are formed of organelles, each of which performs a different function. ()
- 52 The skin takes part in expelling sweat through the pores ()
- 53 A human can control the movement of blood in his body. ()
- 54 Plant cells and animal cells are completely similar in structure. ()
- 55 Every system in the body works individually when exposed to danger. ()
- 56 Stool is stored in anus ()
- 57 All living cells contain chloroplasts. ()
- 58 The muscles of the body work together at the same time. ()
- 59 The final temperature is greater than the temperature of two bodies in contact. ()
- 60 Heat is transferred from a substance of low temperature to a substance of higher temperature. ()
- 61 Sunlight and heat reaching Earth is an example of thermal radiation. ()
- 62 The transfer of heat between two bodies stops when the temperature of each is the same. ()
- 63 Thermal energy is destroyed when it is transferred from one body to another. ()
- 64 Freezing is the transfer of heat due to the movement of a liquid or gaseous substance. ()
- 65 When the thermal energy of the objects increases, the kinetic energy of its molecules increases too. ()
- 66 Matter changes from state to another state by cooling or heating ()
- 67 Matter in the liquid state has a fixed volume and a variable shape. ()
- 68 Matter can be changed from one state to another. ()
- 69 Measuring container is used to measure the temperature of materials. ()
- 70 Thermal energy transfer can occur in only two ways. ()
- 71 Heat transfer from low temperature substance to high temperature substance. ()
- 72 Heat flows from a hotter substance to a colder substance. ()
- 73 Hot water molecules have more kinetic energy than cold water ()



- 74 Thermal energy is transferred in metals by radiation. ()
- 75 We can change the shape of glass by heating only ()
- 76 Heat transfers from the cooler object to the hotter object. ()
- 77 When ice cubes are heated, they melt. ()
- 78 Hot water molecules have more kinetic energy than cold water ()
- 79 Heat transfers between two objects that have the same temperature ()
- 80 Temperature is a measure of the average kinetic energy of the molecules of a matter. ()
- 81 Gases have variable shape and volume. ()
- 82 By decreasing the temperature, the motion speed of molecules of matter decreases ()
- 83 The Thermal energy is transfer through water by convection. ()
- 84 Iron is example for materials that resists the transfer of heat energy ()
- 85 Expansion joints allow bridges to expand safely. ()
- 86 Metals such as copper and iron allow heat to travel freely through them. ()
- 87 Plastic is made from chemical changes to some of the petroleum compounds. ()
- 88 Spaces between molecules of a substance increase by decreasing the temperature of this substance. ()
- 89 Most bridges are made of steel and concrete ()
- 90 Steel is made by chemical change of plastic ()
- 91 Engineers use expansion joints to keep bridges safe. ()
- 92 When the temperature of a matter increases, its molecules move slower. ()
- 93 Thermometer is used to measure the temperature of materials ()
- 94 When the substance expands, its volume increases ()
- 95 When a substance expands its volume decreases. ()
- 96 Substances change from liquid state into gas state during evaporation process. ()
- 97 The main idea to make a thermometer is changing the volume of liquid inside it according to the temperature ()
- 98 Copper and iron allow heat to travel freely through them ()
- 99 Expansion and contraction of matter occur due to changes in temperature ()



- 100 Melting point is the temperature at which liquid matter changes into solid ()
- 101 Boiling point is the temperature at which liquid matter changes into gas ()
- 102 When a liquid is cooled, it may change into gas. ()
- 103 Plastic is an example of materials that resist the transfer of heat energy ()
- 104 The measuring unit of heat is called calorie ()
- 105 Plastic is an example for materials that resists the transfer of thermal energy. ()

Question 03

complete the following

- 1 Cell biologists work with to study how cells can work to repair the human body parts.
- 2 Some cell membranes are surrounded by
- 3 Living organisms grow and reproduce by increasing their cells
- 4 The heart beats in the system accelerates when feeling afraid.
- 5 The cells of are smaller than plant and animal cells.
- 6 The was the first person to use the word cell.
- 7 The small structures inside the cell are called
- 8 The pumps more blood to feed the muscles required for movement.
- 9 Hormones transmitted to all parts of the body by
- 10 Glucose sugar is stored by and in the form of animal starch
- 11 The system in the human body consists of a group of
- 12 The Cell wall of plant cell made of
- 13 The sends instructions to the muscles.
- 14 The insects have a hard, shell-like covering called
- 15 When examining transparent, colorless cells under a microscope we used
- 16 The allows water to enter and exit cells to maintain water balance on both sides.
- 17 The green color in a plant cell is due to it contains the
.....



- 18 The in the urinary system purify the blood.
- 19 During inhalation the diaphragm muscle
- 20 The is the component of the cell that allows water to enter and exit the cell.
- 21 controls all the cell activities such as cell division
- 22 Gravity attracts any object that has
- 23 Living organisms that their bodies consist of one cell are called
- 24 The in the urinary system purify the blood.
- 25 The plant cell is surrounded by
- 26 Magnets attract some metals, such as and
- 27 hormone is secreted by pancreas.
- 28 Bundles of muscle tissues are organized to form the
- 29 Gold and copper are considered from materials as they do not attract to the magnet.
- 30 Cellulose makes up that is found in cell.
- 31 The system that responsible for getting rid of wastes in human is
- 32 All objects are pulled toward Earth's due to the force of Earth.
- 33 The plant cell has definite shape because it has
- 34 Mechanical energy can be changed into energy in the generator.
- 35 The thick liquid inside the cell is called
- 36 The disease is one of the disorders of the endocrine system.
- 37 Materials that don't conduct electricity are called
- 38 Rubber is an electric, while copper is an electric
- 39 The electric circuit contains which is responsible for opening and closing the circuit.
- 40 Electric circuits in houses are connected in way
- 41 is a device that changes kinetic energy into electric energy.
- 42 Plastic is made by change of some compounds of



- 43 Boiling point of a substance is the temperature at which substance changes from into
- 44 The and point are physical properties of matter.
- 45 The boiling point of water is than the boiling point of mercury.
- 46 Temperature is a measure of theenergy of molecules of a substance.
- 47 The temperature at which solid changes to liquid is point.
- 48 The state of matter that has fixed volume and shape is
- 49 Heat will flow from the substance to the one.
- 50 is the process in which matter changes from liquid state to solid state.
- 51 is a measure of the average kinetic energy of particles in any substance.
- 52 The energy which is related to the motion of particles of a matter
- 53 The process in which matter changes from liquid state to gas state is
- 54 materials slow down the heat transfer.
- 55 Changing ice into water followed by changing water into steam shows two different processes which are and
- 56 is the change of matter from gaseous state to liquid state by cooling
- 57 The temperature at which solid changes to liquid is known as point.
- 58 When mixing two substances with different temperatures, they reach the same temperature at
- 59 energy is the energy that the molecules and atoms of substance have due to their motion.
- 60 is the change of matter from liquid state to gaseous state by heating.
- 61 The heat of the Sun can transfer through space to the Earth by
- 62 Heat transfer through iron by
- 63 To adjust the temperature inside some devices as fridge, is used
- 64 When chocolate bar melts, it changes from state to state by gaining energy.
- 65 When the thermal energy of a matter increases, The kinetic energy of its molecules..... and move.....
- 66 The spaces between molecules..... during the melting of solids.



- 67 When a substance contracts, its volume while its volume increase when it
- 68 Heat is flows from a object to a one.
- 69 Heat is one of the forms of
- 70 Examples of thermal conductors materials are and
- 71 Hot food continues to lose heat until its temperature becomes the temperature of the air surrounding it.
- 72 Examples of insulators materials are and
- 73 The handles of cooking ware are made of plastic because it is from
- 74 Heat flows from a object to the surrounding objects.
- 75 Molecules of matter are always in
- 76 When a substance is heated, the kinetic energy of molecules is
- 77 Temperature is a measurement of the of molecules of matter.
- 78 Thermal energy transfers from one place to another by, and
- 79 and affect the rate at which heat is transferred.
- 80 Examples of insulators are, and
- 81 Conduction occurs with objects that are
- 82 Metal, such as, are good conductors.
- 83 A metal doorknob feels than the wooden door it is on
- 84 When a substance changes state, the mass of the substance
- 85 Some materials prevent heat from being transferred, such
- 86 Friction between a moving car and a road cause changing of its energy into energy.
- 87 Smart clothes can in the dark and keep themselves
- 88 Plastic is made by chemical changing of some compounds of
- 89 Glass is a mixture of, and sodium carbonate.
- 90 Concrete is used as the base of and as it is very strong.
- 91 When the toy car is at the top of the slide, it stores energy.
- 92 When the toy car goes down on the slide, its potential energy changes into energy.



Question 04

write the scientific term for each of the following

- 1 The powerhouses of the cell. ()
- 2 The building unit of life on Earth. ()
- 3 The process of using oxygen to obtain chemical energy from food so that cells can continue its function. ()
- 4 Structures within the cell that have a special function ()
- 5 The organelle responsible for controlling cell activities, such as the making cells proteins. ()
- 6 The membrane which allows water to enter and leave the cell ()
- 7 The energy that's produced from electric generators. ()
- 8 The gelatinous liquid inside the cells and supports the cell organelles. ()
- 9 A tool used to see the components of the cell ()
- 10 Living organisms with more than one cell ()
- 11 A group of tissues jointed together and involved in performing a particular function ()
- 12 Organelles that help in assembling and transporting proteins to build and repair the cell ()
- 13 The organ that pumps more blood to feed the muscles required for movement ()
- 14 The organ that sends instructions to the muscle ()
- 15 A system that made up of bones, ligaments, tendons, and cartilage ()
- 16 Sac like structures used for storage of nutrients, water, and waste; in plant cells ()
- 17 The organelle that package materials within the cells and transported them out of the cell. ()
- 18 The cell which able to store and use energy quickly. ()
- 19 A muscular opening at the end of the rectum through which food waste is expelled. ()
- 20 Cells need to be shaped like long fibers, which allows for movement. ()
- 21 A system of organs and tissues that helps the body breathe. ()
- 22 A fluid secreted in the mouth that helps digest food ()
- 23 The main organ of the respiratory system. ()



- 24 A system that converts complex nutrients into simple substances in the human body. ()
- 25 A group of organs that work together to perform a specific function. ()
- 26 The pattern formed by iron filings near the magnet ()
- 27 A system that secretes hormones stimulating the rest of the body's systems to respond. ()
- 28 Small electric charges moving in the wires in a closed electrical circuit. ()
- 29 It's used to color the cell structures to be more visible. ()
- 30 A device inserted into the chest of human body to stimulate the heart to beat regularly. ()
- 31 The temperature at which matter changes from liquid state to gas state. ()
- 32 It is a group of atoms bound together ()
- 33 A process in which liquid molecules move slower and change to another state. ()
- 34 They are muscles that attach to bones of the skeletal system. ()
- 35 They are muscles that you can control their movement ()
- 36 They are muscles that move automatically and you cannot control their movement. ()
- 37 The organ that controls the level of sugar in the human body. ()
- 38 It is the organ which filters the blood from wastes and forms urine. ()
- 39 The process of breaking down the complex food into simpler. ()
- 40 A hormone that controls the level of sugar in blood. ()
- 41 The materials that are attracted to the magnet. ()
- 42 The flow of electrons through an electric wire. ()
- 43 A device for generating electricity by using magnets ()
- 44 They are materials that the electric charges can flow through. ()
- 45 It is the changing matter from solid state to liquid state ()
- 46 It is the change of matter from liquid state to solid state. ()
- 47 It is the smallest building unit of matter ()
- 48 Total sum of kinetic energy of its molecules and its atoms. ()



- 49 It is the decrease of the size of a substance due to decreasing of its temperature. ()
- 50 A form of energy that gained or lost by the matter to change its state. ()
- 51 It is changing matter from gas state to liquid state. ()
- 52 The state of matter that has fixed volume and shape ()
- 53 The temperature at which matter changes from liquid state to gas state. ()
- 54 They are materials that slow down the heat transfer ()
- 55 It is the measuring unit of heat. ()
- 56 Way of transferring heat through liquids and gases. ()
- 57 The way by which the heat is transferred through solid only. ()
- 58 The mass of a substance does not change when this substance changes from one state to another. ()
- 59 A material is made of a mixture of iron and other elements. ()
- 60 The increase in the volume of a material as its temperature increases. ()
- 61 Joints between parts of a bridge that allow its expansion without being damaged. ()
- 62 It is the decrease of the size of a substance due to decreasing of its temperature. ()
- 63 Energy transferred from a hot object to a cold object ()
- 64 Materials that resistance to the transfer of heat energy ()
- 65 Materials that allow heat to flow through them. ()
- 66 A condition in which the object temperature is equal to the surrounding environment. ()
- 67 Transfer of Heat due to the movement of a liquid or gas. ()
- 68 Heat travels through space. ()
- 69 Transfer of Heat when objects that are touching. ()
- 70 When a substance changes state, the mass of the substance does not change. ()
- 71 A material is made of a mixture of iron and other elements. ()
- 72 A mixture of rock, sand and water, which becomes hard after it dries. ()
- 73 The energy that kinetic energy changes into when a moving object is affected by friction ()



- 74 A form of energy stored in an object when it is placed on the top of a ramp. ()
- 75 A material consists of sand, limestone and soda ash ()

Question 05

Give reason for each of the following

- 1 Muscle cells need to be shaped like long fibers.
.....
- 2 No system in the body can work alone.
.....
- Cells must vary in shape and size.
- 3
.....
- 4 The mitochondria are the powerhouses of the cell.
.....
- 5 There is no cell membrane.
.....
- 6 The endocrine system plays an important role in the fight or flight response.
.....
- 7 It is possible to distinguish between plant cells and animal cells by a microscope.
.....
- 8 Plants can make their own food.
.....
- 9 The cell membrane has the property of selectively permeable.
.....
- Animals cannot make their own food.
- 10
.....
- Chewing and breaking down food facilitates digestion process.
- 11
.....
- 12 The cell allows water to go outside it.
.....
- 13 Heart muscle contracts and relaxes without stopping.
.....



- 14 Cardiac muscle is considered as involuntary muscle.
.....
- 15 Blood cells and proteins can't pass through kidney's nephrons.
.....
- 16 Undigested food become solid wastes inside the large intestine.
.....
- 17 Heart muscle relaxes and contracts.
.....
- 18 The cell membrane maintains the balance of water on both sides of the cell.
.....
- 19 The number of cells in the body of an adult is much greater than the number of cells in the body of the young child.
.....
- 20 Microscope is used to see cells.
.....
- 21 The cell needs energy in the form of food and oxygen.
.....
- 22 Electric generators have great importance in our life.
.....
- 23 The human body is considered as an electric conductor.
.....
- 24 The Importance of the Generators.
.....
- 25 The electric circuit contains a switch.
.....
- 26 The electric wires are covered with rubber or plastic.
.....
- 27 All metals are considered as electric conductors
.....
- 28 Some electric circuits contain electric resistors. Or Electric stoves contain resistors.
.....



- 29 Diabetics must take regular shots of insulin
.....
- 30 The electric circuit is considered as a system
.....
- 31 Matter may change from one state to another.
.....
- 32 Evaporation and condensation are two opposite processes.
.....
- 33 Engineers use expansion joints in the design of bridges.
.....
- 34 The lower part of the electric iron is made of iron
.....
- 35 Scientists should study the structure of molecules of different materials
.....
- 36 Smart clothes have many benefits.
.....
- 37 Meteorologists must understand convection and radiation
.....
- 38 A metal doorknob feels cooler than the wooden door it is on.
.....
- 39 A metal doorknob feels more than the wooden door, even though they are both the same temperature.
.....
- 40 Small spaces are left between the railroad tracks.
.....
- 41 Cookware is made of aluminum
.....



Question 06

What happens if ?

- 1 Too much water enters the cell.
.....
- 2 The microscope was not discovered.
.....
- 3 There is no mitochondria inside the cell.
.....
- 4 There is no Cytoplasm inside the cell.
.....
- 5 There is no nucleus inside the cell.
.....
- 6 There is no chloroplast in the plant cell.
.....
- 7 There is no vacuole in the plant cell.
.....
- 8 Muscle contraction and relaxation.
.....
- 9 Diaphragm muscle contracts.
.....
- 10 Heart muscle contracts and relaxes.
.....
- 11 Faced with threat or danger to heartbeats.
.....
- 12 Contraction of the front muscle in the upper arm and relaxation of the back muscle.
.....



- 13 The cell wall is absent in the plant cell?
.....
- 14 Your body doesn't get rid of waste
.....
- 15 The Nephrons of the Kidneys Not Work Properly
.....
- 16 Pancreas doesn't make its function correctly.
.....
- 17 A magnet is approached close to some iron nails mixed with small pieces of paper
.....
- 18 There is no endoplasmic reticulum in the plant cell.
.....
- 19 The brain of cyclist when he sees a dangerous situation.
.....
- 20 The front muscle of the upper arm contracts.
.....
- 21 Large magnets spin at a high speed, around coiled wires.
.....
- 22 The electric circuit doesn't contain a switch.
.....
- 23 You touch non insulated wire has an electric current pass through it.
.....
- 24 A person touches a non-insulated electric wire through which an electric current passes
.....
- 25 Electric circuits in houses are connected in series.
.....



- 26 You touch a hot cup of tea. (according to the transfer of heat)
.....
- 27 You heat a piece of butter. (According to change of state)
.....
- 28 The level of alcohol inside a thermometer if we put it in cold water.
.....
- 29 Absence of expansion joints in the designed bridges.
.....
- 30 The mass of a piece of butter after melting it.
.....
- 31 The speed of a moving object when it is affected by friction.
.....
- 32 The kinetic energy of the molecules of a matter when it becomes warmer.
.....
- 33 Making chemical change to some compounds of petroleum.
.....
- 34 The iron handle was made of metal.
.....
- 35 Mixing sand, limestone and soda ash at high temperature
.....
- 36 Pick up a hot pot with a metal handle.
.....
- 37 Bridges if expansion joints are not included in the design
.....
- 38 Weight an ice cube then heat it .(due to the mass off ice cube)
.....
- 39 You lift your face to the sun.
.....



40 Increase in the temperature of a body

.....

41 A lizard stands on a hot rock

.....

42 Concrete is left to dry.

.....

Question 07

Answer the following questions

Explain what is meant by:

- 1 Thermal equilibrium
.....
- 2 Thermal Conductors
.....
- 3 Conduction
.....
- 4 Selectively permeable.
.....
- 5 Convection
.....
- 6 Radiation
.....
- 7 Conservation of Mass
.....
- 8 Cellular respiration.
.....

Write the function of each:

- 1 Small intestine
.....
- 2 Respiratory system
.....
- 3 Gallbladder in the human body
.....



Explain How are the following materials created?

- ① Steel
- ② Shrink-wrap
- ③ Plastic
- ④ Concrete
- ⑤ Glass

جميع أسئلة الشيت أسئلة رسميه من امتحانات المحافظات و أسئلة الكتاب المدرسي و أسئلة التقييمات

Theme 1

choose the correct answer	to number 58
Put true or false	To number 58
Complete the following	To number 41
Scientific term	To number 44
Give reason	To number 29
What happen if	To number 25





First term Questions Bank



Question 01

Choose the correct answers

- 1 The cell takes the materials it needs and uses them to get
 (a) waste (b) energy (c) matter
- 2 The organisms made up of more than one cell such as.....
 (a) plant (b) bacteria (c) unfertilized bird egg
- 3 Copper and don't attract to the magnet as they are nonmagnetic materials
 (a) iron (b) cobalt (c) aluminum
- 4 is considered the building unit of the bodies of living organisms.
 (a) The cell (b) Oxygen (c) Cell membrane
- 5 The Organ that secretes Insulin hormone for regulating the level of Sugar is.....
 (a) Pancreas (b) Stomach (c) Liver
- 6 The allow water to pass to and from the cell
 (a) nucleus (b) cell membrane (c) cell wall
- 7 contains only one cell.
 (a) Human body (b) Plants (c) Unfertilized bird egg
- 8 is an organ contains voluntary and involuntary muscles.
 (a) Heart (b) Legs (c) Eye
- 9 Which of the following cells is the smallest in size?
 (a) plant cells (b) Bacterial cells (c) Unfertilized bird egg
- 10 Cells need and to grow and live
 (a) Carbon dioxide - food (b) Water - wastes (c) Oxygen – food
- 11 maintains the balance of water on both sides of the cell.
 (a) The nucleus (b) Cell membrane (c) cell wall



- 12 The heart is one of the organs of..... system.
 (a) Nervous (b) Circulatory (c) digestive
- 13is the smallest basic unit of life.
 (a) The nucleus (b) Cell membrane (c) cell wall
- 14 The..... surrounds each cell, protects it and regulates what can enter it.
 (a) Cytoplasm (b) Golgi apparatus (c) Cell membrane
- 15 Insulin hormone is responsible for regulating the level of in blood
 (a) proteins (b) sugar (c) water
- 16 bacteria are considered organisms...
 (a) multicellular (b) acellular (c) unicellular
- 17 A component of the cell that is characterized by its ability to store nutrients, water, and waste is.....
 (a) vacuole (b) Cytoplasm (c) Mitochondria
- 18 contains the pigment chlorophyll, which helps it absorb the energy of sunlight to carry out the photosynthesis process.
 (a) Nucleus (b) Chloroplast (c) Mitochondria
- 19 Animal bodies contain a variety of cells, such as
 (a) muscle cells (b) Photosynthesis (c) cell wall
- 20 is considered the main control center in the cell.
 (a) Nucleus (b) Chloroplast (c) Golgi apparatus
- 21 A group of organs working together is.....
 (a) systems (b) Tissues (c) Cells
- 22 One of the components of the cell prepares and packages materials within the cell and transports them out of the cell is.....
 (a) vacuole (b) Golgi apparatus (c) Mitochondria
- 23 Theis used to see cell components.
 (a) microscope (b) telescope (c) lens
- 24 One of the components of a cell that similar to an electrical power station is.....
 (a) Mitochondria (b) Cytoplasm (c) Chloroplasts



- 25 Microorganisms are similar to plants in
- (a) Number of cells (b) presence of cells (c) Size of cells
- 26 The bodies of animals are characterized by the presence of special structures that help them keep their shape, such as.....
- (a) Skin (b) Bones (c) Intestines
- 27 secretes enzymes to increase the chemical breakdown of food
- (a) lungs (b) stomach (c) kidney
- 28 A type of cell that contains a cell wall and Chloroplast is.....
- (a) Animal cell (b) Plant cell (c) Bacteria
- 29 The liver stores sugar and converts it into
- (a) protein (b) fat (c) glycogen
- 30 Muscle cells need to be shaped likefibers.
- (a) Short (b) Long (c) Fatty
- 31 The plant cell is distinguished from the animal cell in that it contains which gives it a definite shape.
- (a) Cell membrane (b) Cell wall (c) vacuole
- 32 The process of absorbing nutrients begins through the capillaries in the.....
- (a) stomach (b) esophagus (c) small intestine
- 33 The..... coordinates the needed movements to muscles.
- (a) brain (b) Heart (c) Blood vessels
- 34 The endocrine glands secrete to help the body perform its function.
- (a) hormones (b) salts (c) proteins
- 35 The system receives nervous signals from the body's organs, such as the eye.
- (a) Nervous (b) Muscular (c) Respiratory
- 36 Urea is formed due to the breaking down of inside the body cells
- (a) carbohydrates (b) fats (c) proteins
- 37 The group of similar cells work together to form
- (a) organ (b) tissue (c) system



- 38 The process of muscle contraction leads to..... its length.
 (a) decrease (b) increase (c) no change
- 39 When a piece of aluminum is replaced by a piece of wood in an electrical circuit, this causes
 (a) current flow (b) open the circuit. (c) close the circuit
- 40 Which of the following is a list of components of the body system in order from least complex to most complex?
 (a) Tissue, cell, organ, body system. (b) Cell, tissue, organ, body system. (c) Organ, tissue, cell, body system.
- 41 Nutrients and oxygen enter cell through the
 (a) cell membrane. (b) mitochondria (c) nucleus
- 42 Which of the following structures is found in both plant and animal cells?
 (a) Cell membrane. (b) Cell wall. (c) Chloroplast
- 43 The control center of the cell and is responsible for cell division
 (a) mitochondria (b) nucleus (c) chloroplast
- 44 Which of the following is found in an acacia plant leaf and is not found in human?
 (a) Cell wall. (b) Mitochondria (c) Cytoplasm
- 45 When two muscles work together to carry out a movement, one muscle while the other
 (a) moves - stays still. (b) contracts - relaxes. (c) stays still - relaxes.
- 46 Which of the following muscles is voluntary?
 (a) Stomach muscles. (b) muscles of the esophagus (c) Neck muscles.
- 47 The factors on which gravitational force depends are
 (a) mass and shape (b) size and shape. (c) distance and mass
- 48 The electrical insulating materials include
 (a) rubber (b) iron (c) aluminum
- 49 All the following muscles are considered as voluntary muscles, except muscles of
 (a) Forearm (b) Heart (c) Neck



- are used to stop the flow of electricity.
- 50 (a) Resistors (b) Electric insulators (c) Electric conductors
- All of the following are responsible for excretion process, except
- 51 (a) digestive system (b) skin (c) respiratory system
- Nephrons play an important role in
- 52 (a) secreting hormones to control the body functions (b) controlling the movement of body from place to another (c) filtering the blood from waste materials
- Urination process happens by the help of the system
- 53 (a) digestive (b) urinary (c) respiratory
- Gravity and magnetism are similar in that
- 54 (a) they are repulsion forces only (b) they are attraction forces only (c) we cannot see both of them.
- The area around the magnet in which magnetic force appears is
- 55 (a) gravity (b) electric conductor (c) magnetic field
- The artificial pacemaker is inserted into the of human body.
- 56 (a) legs (b) chest (c) neck
- Scientists use a to detect the flow of electric current.
- 57 (a) generator (b) galvanometer (c) battery
- All the following animals have bones in their bodies, except
- 58 (a) dogs (b) birds (c) insects
- The temperature during melting of a solid
- 59 (a) decreases (b) increases (c) doesn't change.
- Heat will flow from the substance to the one.
- 60 (a) hotter - colder (b) frozen - melted (c) colder - hotter
- The temperature of a substance is defined as the average amount of of the molecules or other particles of a sample of matter.
- 61 (a) potential energy (b) mass (c) kinetic energy



- 62 Objects with more thermal energy have kinetic energy.
 (a) more (b) less (c) the same
- 63 happens as a result of the separation of the particles of a substance when heat is transferred to it.
 (a) Contraction (b) Expansion (c) Growth
- 64 If you want to design a product which conducts heat well, which material will you think of?
 (a) Wood (b) Plastic (c) Metal
- 65 is the transfer of heat due to the movement of a liquid or gas.
 (a) Radiation (b) Conduction (c) Convection
- 66 Raising the temperature of materials can cause
 (a) freezing and expansion (b) melting and expansion (c) melting and contraction
- 67 The point at which molecules in liquid water are heated and separated from each other until they become gas, is called
 (a) melting point (b) freezing point (c) boiling point
- 68 Which energy is generated due to the motion of particles in a certain substance?
 (a) Thermal energy (b) Muscular energy (c) Potential energy
- 69 Which of the following may not be a source of thermal energy?
 (a) Small oven (b) Moon (c) The Sun
- 70 Heat is transferred by convection in the molecules of the following substances, except
 (a) milk (b) water (c) iron
- 71 Sunlight and the heat of the Sun reach Earth by
 (a) conduction (b) radiation (c) convection
- 72 Matter in the liquid state has volume and shape.
 (a) fixed - fixed (b) variable - fixed (c) fixed - variable
- 73 is used to measure the temperature of materials.
 (a) Graduated cylinder (b) Thermometer (c) Measuring tape



- 74 Changing from gas state to liquid state is called.....
- (a) melting (b) evaporation (c) condensation
- 75 As a result of heat flow through metals, they.....
- (a) expand (b) contract (c) get smaller
- 76 The spaces between molecules during the melting of solids.
- (a) decrease (b) increase (c) doesn't change
- 77 Metallic parts of a bridgein different temperatures
- (a) expand and contract (b) expand only (c) contract only
- 78 The molecule is composed of very small particles called.....
- (a) cells (b) atoms (c) mixtures
- 79 All these substances are solids, except
- (a) pen (b) balloon (c) soup
- 80 The measuring unit of heat is called
- (a) calorie (b) kilogram (c) gram
- 81 process is the change of matter from the gas state to the liquid state
- (a) Melting (b) Evaporation (c) Condensation
- 82 In which state(s) of matter are the molecules away from each other?
- (a) Solid (b) Gas (c) Solid and gas
- 83 By heating water its thermal energy
- (a) decreases (b) at the same (c) increases
- 84 Objects with less thermal energy have kinetic energy.
- (a) more (b) less (c) the same
- 85 Change of matter from Liquid state to the gas state is
- (a) Freezing (b) Condensation (c) Evaporation
- 86 If you mix a cup of water with temperature 20°C to another with temperature 60°C , the temperature of the mixture will be
- (a) 60°C (b) 20°C (c) 38°C



- 87 are used to slow down the flow of electricity
 (a) Galvanometer (b) resistors (c) Heat conductors
- 88 is used to slow the flow of an electric current in the electric circuit.
 (a) battery (b) resistor (c) lamp
- 89 If you want to design a product that conducts heat well, you will use
 (a) wood (b) metal (c) plastic
- 90 Both and are examples of liquid matter.
 (a) water – milk (b) water - wood (c) oil - paper
- 91 Water changes into ice by
 (a) Melting (b) Evaporation (c) Freezing
- 92 Temperature is a measure of the energy of molecules of a substance
 (a) kinetic (b) light (c) chemical
- 93 Change of matter from solid state to the liquid state is
 (a) freezing (b) Melting (c) condensation
- 94 The transformation of gas into liquid is called..... process
 (a) melting (b) evaporation (c) condensation
- 95 When the kinetic energy of liquids decreases, they may
 (a) expand (b) contract (c) evaporate
- 96 Railroad tracks are made up of
 (a) glass (b) plastic (c) iron
- 97 When an object stops on the top of a ramp, it stores.....energy.
 (a) Kinetic (b) light (c) potential
- 98 When a car goes down on a ramp, itsenergy changes to..... energy.
 (a) kinetic/ potential (b) sound/potential (c) potential /kinetic
- 99 Due to the friction between a moving object and a flat road, the moving object changes some of energy into energy.
 (a) kinetic/ thermal (b) potential/ thermal (c) thermal /kinetic



Question 02

put (true) or (false)

- 1 The cell nucleus is responsible for cell division. ☒
- 2 Tissue are made up of a group of organs. ☒
- 3 Involuntary muscles move automatically, their movement can't be controlled. ☒
- 4 New cells come from existing cells. ☒
- 5 Undigested food is stored in the small intestine until it is expelled. ☒
- 6 The brain does not respond when feeling stressed. ☒
- 7 The number of cells is similar in plants and animals ☒
- 8 The two arms move due to contraction and relaxation muscles. ☒
- 9 Muscle cells are short fibers that allow movement, storage and release of energy. ☒
- 10 An animal cell is similar to a plant cell in shape and structure. ☒
- 11 The plant cell is distinguished from the animal cell by the presence of chloroplasts and a cell wall. ☒
- 12 The brain pumps more blood to muscles. ☒
- 13 Every plant cell has a cell wall and therefore does not need a cell membrane. ☒
- 14 The circulatory system transports only hormones to all body parts. ☒
- 15 Each cell is surrounded by a plasma membrane that protects it and regulates what can enter ☒
- 16 All cells have a cell wall ☒
- 17 Plant cells are similar to animal cell in the presence of a nucleus. ☒
- 18 One of the functions of the endoplasmic reticulum is helping in assembling proteins. ☒
- 19 Animals can make their own food because of the presence of chloroplasts inside their cells ☒
- 20 Human's red blood cells contain a nucleus ☒



- 21 One of the functions of the endoplasmic reticulum is helping in assembling proteins. ☒
- 22 Cell biologists are scientists who study rocks ☒
- 23 Absorption of food occurs in the small intestine ☒
- 24 Neck muscles are from voluntary muscles. ☒
- 25 Each animal cell has cell wall which is made up of cellulose. ☒
- 26 The cell organelles float in the cytoplasm ☒
- 27 Tissue consists of a group of similar cells. ☒
- 28 Cellular respiration takes place inside cells by golgi apparatus ☒
- 29 When the heartbeats increase, the blood pressure decreases ☒
- 30 Bacteria and horse are considered as multicellular organisms ☒
- 31 Exoskeleton gives some insects their shapes ☒
- 32 The forearm moves down when the muscles in the back contract ☒
- 33 Mitochondria provide the cell with the needed food ☒
- 34 Water and waste materials are stored in vacuole ☒
- 35 Chloroplasts are found in the cells of banana plant leaves. ☒
- 36 The muscle that helps in moving the eyes in different directions is a voluntary muscle. ☒
- 37 The cellular respiration occurs in endoplasmic reticulum. ☒
- 38 An animal cell has a definite shape because it has a cell wall. ☒
- 39 Digestive system digests food without the help of nervous system. ☒



- 40 The acid and enzymes which are secreted inside the stomach lead to more breaking down of food ☒
- 41 Nephron helps in the filtration of blood from urea. ☒
- 42 Sweat is excreted by the lung ☐
- 43 Nephrons are microscopic filters that remove harmful substance from body. ☒
- 44 In the parallel circuits, the electric current can flow in one branch. ☐
- 45 All electric circuits in our homes are connected in parallel. ☒
- 46 Digestion begins when the food enters esophagus ☐
- 47 A piece of aluminum foil and a plastic spoon will be attracted to the magnet. ☐
- 48 People whose kidneys are not working properly must use other devices to filter their blood from waste ☒
- 49 Cobalt is an example of magnetic materials. ☒
- 50 The magnetism is a repulsion force only. ☐
- 51 All cells are formed of organelles, each of which performs a different function. ☒
- 52 The skin takes part in expelling sweat through the pores ☒
- 53 A human can control the movement of blood in his body. ☐
- 54 Plant cells and animal cells are completely similar in structure. ☐
- 55 Every system in the body works individually when exposed to danger. ☐
- 56 Stool is stored in anus ☐
- 57 All living cells contain chloroplasts. ☐
- 58 The muscles of the body work together at the same time. ☐
- 59 The final temperature is greater than the temperature of two bodies in contact. ☐
- 60 Heat is transferred from a substance of low temperature to a substance of higher temperature. ☐



- 61 Sunlight and heat reaching Earth is an example of thermal radiation. ✓
- 62 The transfer of heat between two bodies stops when the temperature of each is the same. ✓
- 63 Thermal energy is destroyed when it is transferred from one body to another. ✗
- 64 Freezing is the transfer of heat due to the movement of a liquid or gaseous substance. ✗
- 65 When the thermal energy of the objects increases, the kinetic energy of its molecules increases too. ✓
- 66 Matter changes from state to another state by cooling or heating ✓
- 67 Matter in the liquid state has a fixed volume and a variable shape. ✓
- 68 Matter can be changed from one state to another. ✓
- 69 Measuring container is used to measure the temperature of materials. ✗
- 70 Thermal energy transfer can occur in only two ways. ✗
- 71 Heat transfer from low temperature substance to high temperature substance. ✗
- 72 Heat flows from a hotter substance to a colder substance. ✓
- 73 Hot water molecules have more kinetic energy than cold water ✓
- 74 Thermal energy is transferred in metals by radiation. ✗
- 75 We can change the shape of glass by heating only ✗
- 76 Heat transfers from the cooler object to the hotter object. ✗
- 77 When ice cubes are heated, they melt. ✓
- 78 Hot water molecules have more kinetic energy than cold water ✓
- 79 Heat transfers between two objects that have the same temperature ✗
- 80 Temperature is a measure of the average kinetic energy of the molecules of a matter. ✓
- 81 Gases have variable shape and volume. ✓
- 82 By decreasing the temperature, the motion speed of molecules of matter decreases ✓
- 83 The Thermal energy is transfer through water by convection. ✓



- 84 Iron is example for materials that resists the transfer of heat energy ☐
- 85 Expansion joints allow bridges to expand safely. ☒
- 86 Metals such as copper and iron allow heat to travel freely through them. ☒
- 87 Plastic is made from chemical changes to some of the petroleum compounds. ☒
- 88 Spaces between molecules of a substance increase by decreasing the temperature of this substance. ☐
- 89 Most bridges are made of steel and concrete ☒
- 90 Steel is made by chemical change of plastic ☐
- 91 Engineers use expansion joints to keep bridges safe. ☒
- 92 When the temperature of a matter increases, its molecules move slower. ☐
- 93 Thermometer is used to measure the temperature of materials ☒
- 94 When the substance expands, its volume increases ☒
- 95 When a substance expands its volume decreases. ☐
- 96 Substances change from liquid state into gas state during evaporation process. ☒
- 97 The main idea to make a thermometer is changing the volume of liquid inside it according to the temperature ☒
- 98 Copper and iron allow heat to travel freely through them ☒
- 99 Expansion and contraction of matter occur due to changes in temperature ☒
- 100 Melting point is the temperature at which liquid matter changes into solid ☐
- 101 Boiling point is the temperature at which liquid matter changes into gas ☒
- 102 When a liquid is cooled, it may change into gas. ☐
- 103 Plastic is an example of materials that resist the transfer of heat energy ☒
- 104 The measuring unit of heat is called calorie ☒



Question 03

complete the following

- 1 Cell biologists work with doctors to study how cells can work to repair the human body parts.
- 2 Some cell membranes are surrounded by cell wall
- 3 Living organisms grow and reproduce by increasing number their cells
- 4 The heart beats in the circulatory system accelerates when feeling afraid.
- 5 The cells of bacteria are smaller than plant and animal cells.
- 6 The Robert Hooke was the first person to use the word cell.
- 7 The small structures inside the cell are called organelles
- 8 The heart pumps more blood to feed the muscles required for movement.
- 9 Hormones transmitted to all parts of the body by circulatory system.
- 10 Glucose sugar is stored by liver and muscle in the form of animal starch
- 11 The system in the human body consists of a group of organs
- 12 The Cell wall of plant cell made of Cellulose.
- 13 The brain sends instructions to the muscles.
- 14 The insects have a hard, shell-like covering called exoskeleton.
- 15 When examining transparent, colorless cells under a microscope we used stain / dye
- 16 The cell membrane allows water to enter and exit cells to maintain water balance on both sides.
- 17 The green color in a plant cell is due to it contains the pigment chlorophyll.
- 18 The kidneys in the urinary system purify the blood.
- 19 During inhalation the diaphragm muscle contracts.
- 20 The cell membrane is the component of the cell that allows water to enter and exit the cell.
- 21 The nucleus controls all the cell activities such as cell division
- 22 Gravity attracts any object that has mass.
- 23 Living organisms that their bodies consist of one cell are called unicellular.
- 24 The kidneys In the urinary system purify the blood.



- 25 The plant cell is surrounded by **cell wall**.
- 26 Magnets attract some metals, such as **iron, nickel, and cobalt**.
- 27 **Insulin** hormone is secreted by pancreas.
- 28 Bundles of muscle tissues are organized to form the **muscle**
- 29 Gold and copper are considered from **non-magnetic** materials as they do not attract to the magnet.
- 30 Cellulose makes up **cell wall** that is found in **plant** cell.
- 31 The system that responsible for getting rid of wastes in human is **excretory system**
- 32 All objects are pulled toward Earth's **center** due to the **gravitational** force of Earth.
- 33 The plant cell has definite shape because it has **cell wall**.
- 34 Mechanical energy can be changed into **electrical** energy in the generator.
- 35 The thick liquid inside the cell is called **cytoplasm**.
- 36 The **Diabetes** disease is one of the disorders of the endocrine system.
- 37 Materials that don't conduct electricity are called **insulators**.
- 38 Rubber is an electric **insulator**, while copper is an electric **conductor**.
- 39 The electric circuit contains **switch** which is responsible for opening and closing the circuit.
- 40 Electric circuits in houses are connected in **parallel** way
- 41 **Generator** is a device that changes kinetic energy into electric energy.
- 42 Plastic is made by **chemical** change of some compounds of **petroleum**
- 43 Boiling point of a substance is the temperature at which substance changes from **liquid** into **gas**
- 44 The **melting** and **boiling** point are physical properties of matter.
- 45 The boiling point of water is **less** than the boiling point of mercury.
- 46 Temperature is a measure of the **kinetic** energy of molecules of a substance.
- 47 The temperature at which solid changes to liquid is **melting** point.
- 48 The state of matter that has fixed volume and shape is **solid**
- 49 Heat will flow from the **hotter** substance to the **colder** one.



- 50 **Freezing** is the process in which matter changes from liquid state to solid state.
- 51 **Temperature** is a measure of the average kinetic energy of particles in any substance.
- 52 The **kinetic** energy which is related to the motion of particles of a matter
- 53 The process in which matter changes from liquid state to gas state is **evaporation process**
- 54 **Thermal insulators** materials slow down the heat transfer.
- 55 Changing ice into water followed by changing water into steam shows two different processes which are **melting** and **boiling**.
- 56 **Condensation** is the change of matter from gaseous state to liquid state by cooling
- 57 The temperature at which solid changes to liquid is known as **melting point**.
- 58 When mixing two substances with different temperatures, they reach the same temperature at **thermal equilibrium**
- 59 **Kinetic** energy is the energy that the molecules and atoms of substance have due to their motion.
- 60 **Evaporation** is the change of matter from liquid state to gaseous state by heating.
- 61 The heat of the Sun can transfer through space to the Earth by **radiation**
- 62 Heat transfer through iron by **conduction**
- 63 To adjust the temperature inside some devices as fridge, **thermostat** is used
- 64 When chocolate bar melts, it changes from **solid** state to **liquid** state by gaining **thermal** energy.
- 65 When the thermal energy of a matter increases, The kinetic energy of its molecules **increase** and move **faster**
- 66 The spaces between molecules **increase** during the melting of solids.
- 67 When a substance contracts, its volume **decrease** while its volume increase when it **expands**
- 68 Heat is flows from a **hotter** object to a **cooler** one.
- 69 Heat is one of the forms of **energy**.
- 70 Examples of thermal conductors materials are **iron** and **aluminum**
- 71 Hot food continues to lose heat until its temperature becomes **equal** the temperature of the air surrounding it.
- 72 Examples of insulators materials are **plastic** and **wood**
- 73 The handles of cooking ware are made of plastic because it is from **thermal insulator**



- 74 Heat flows from a **hot** object to the surrounding objects.
- 75 Molecules of matter are always in **continuous motion**
- 76 When a substance is heated, the kinetic energy of molecules is **increase**
- 77 Temperature is a measurement of the **average Kinetic energy** of molecules of matter.
- 78 Thermal energy transfers from one place to another by **conduction**, **convection** and **radiation**
- 79 **The difference in temperature between objects** and **Time of contact between objects increases** affect the rate at which heat is transferred.
- 80 Examples of insulators are **wood**, **plastic** and **glass**
- 81 Conduction occurs with objects that are **solid**
- 82 Metal, such as **Iron**, **Aluminium** are good conductors.
- 83 A metal doorknob feels **cooler** than the wooden door it is on
- 84 When a substance changes state, the mass of the substance **does not change**
- 85 Some materials prevent heat from being transferred, such **plastic**
- 86 Friction between a moving car and a road cause changing of its **Kinetic** energy into **thermal** energy.
- 87 Smart clothes can **light** in the dark and keep themselves **clean**.
- 88 Plastic is made by chemical changing of some compounds of **petroleum**
- 89 Glass is a mixture of **sand**, **Limestone** and sodium carbonate.
- 90 Concrete is used as the base of **building** and as it is very strong.
- 91 When the toy car is at the top of the slide, it stores **potential** energy.
- 92 When the toy car goes down on the slide, its potential energy changes into **Kinetic** energy.

Question 04

write the scientific term for each of the following

- | | | |
|---|--|----------------------|
| 1 | The powerhouses of the cell. | Mitochondria |
| 2 | The building unit of life on Earth. | cell |
| 3 | The process of using oxygen to obtain chemical energy from food so that cells can continue its function. | Cellular respiration |
| 4 | Structures within the cell that have a special function | Organelles |
| 5 | The organelle responsible for controlling cell activities, such as the making cells proteins. | Nucleus |



- | | | |
|----|---|-------------------------|
| 6 | The membrane which allows water to enter and leave the cell | cell membrane |
| 7 | The energy that's produced from electric generators. | Electric energy |
| 8 | The gelatinous liquid inside the cells and supports the cell organelles. | Cytoplasm |
| 9 | A tool used to see the components of the cell | Microscope |
| 10 | Living organisms with more than one cell | Multicellular organisms |
| 11 | A group of tissues jointed together and involved in performing a particular function | Organ |
| 12 | Organelles that help in assembling and transporting proteins to build and repair the cell | Endoplasmic reticulum |
| 13 | The organ that pumps more blood to feed the muscles required for movement | Heart |
| 14 | The organ that sends instructions to the muscle | Brain |
| 15 | A system that made up of bones, ligaments, tendons, and cartilage | Musculoskeletal system |
| 16 | Sac like structures used for storage of nutrients, water, and waste; in plant cells | sap vacuoles |
| 17 | The organelle that package materials within the cells and transported them out of the cell. | Golgi apparatus |
| 18 | The cell which able to store and use energy quickly. | Muscle cell |
| 19 | A muscular opening at the end of the rectum through which food waste is expelled. | anus |
| 20 | Cells need to be shaped like long fibers, which allows for movement. | Muscle cell |
| 21 | A system of organs and tissues that helps the body breathe. | respiratory system |
| 22 | A fluid secreted in the mouth that helps digest food | Saliva |
| 23 | The main organ of the respiratory system. | Lung |
| 24 | A system that converts complex nutrients into simple substances in the human body. | Digestive system |
| 25 | A group of organs that work together to perform a specific function. | System |
| 26 | The pattern formed by iron filings near the magnet | Magnetic field |
| 27 | A system that secretes hormones stimulating the rest of the body's systems to respond. | Endocrine system |
| 28 | Small electric charges moving in the wires in a closed electrical circuit. | Electrons |



- | | | |
|----|--|-----------------------|
| 29 | It's used to color the cell structures to be more visible. | stain |
| 30 | A device inserted into the chest of human body to stimulate the heart to beat regularly. | Artificial peacemaker |
| 31 | The temperature at which matter changes from liquid state to gas state. | Boiling point |
| 32 | It is a group of atoms bound together | Molecule |
| 33 | A process in which liquid molecules move slower and change to another state. | Freezing |
| 34 | They are muscles that attach to bones of the skeletal system. | skeletal muscles |
| 35 | They are muscles that you can control their movement | Voluntary muscles |
| 36 | They are muscles that move automatically and you cannot control their movement. | Involuntary muscles |
| 37 | The organ that controls the level of sugar in the human body. | Pancreas |
| 38 | It is the organ which filters the blood from wastes and forms urine. | Kidney |
| 39 | The process of breaking down the complex food into simpler. | Digestion process |
| 40 | A hormone that controls the level of sugar in blood. | Insulin |
| 41 | The materials that are attracted to the magnet. | Magnetic materials |
| 42 | The flow of electrons through an electric wire. | Electric current |
| 43 | A device for generating electricity by using magnets | Generator |
| 44 | They are materials that the electric charges can flow through. | Electric conductors |
| 45 | It is the changing matter from solid state to liquid state | Melting process |
| 46 | It is the change of matter from liquid state to solid state. | Freezing |
| 47 | It is the smallest building unit of matter | atom |
| 48 | Total sum of kinetic energy of its molecules and its atoms. | Thermal energy |
| 49 | It is the decrease of the size of a substance due to decreasing of its temperature. | Contraction |
| 50 | A form of energy that gained or lost by the matter to change its state. | Thermal energy |
| 51 | It is changing matter from gas state to liquid state. | Condensation |



- 52 The state of matter that has fixed volume and shape
- 53 The temperature at which matter changes from liquid state to gas state.
- 54 They are materials that slow down the heat transfer
- 55 It is the measuring unit of heat.
- 56 Way of transferring heat through liquids and gases.
- 57 The way by which the heat is transferred through solid only.
- 58 The mass of a substance does not change when this substance changes from one state to another.
- 59 A material is made of a mixture of iron and other elements.
- 60 The increase in the volume of a material as its temperature increases.
- 61 Joints between parts of a bridge that allow its expansion without being damaged.
- 62 It is the decrease of the size of a substance due to decreasing of its temperature.
- 63 Energy transferred from a hot object to a cold object
- 64 Materials that resistance to the transfer of heat energy
- 65 Materials that allow heat to flow through them.
- 66 A condition in which the object temperature is equal to the surrounding environment.
- 67 Transfer of Heat due to the movement of a liquid or gas.
- 68 Heat travels through space.
- 69 Transfer of Heat when objects that are touching.
- 70 When a substance changes state, the mass of the substance does not change.
- 71 A material is made of a mixture of iron and other elements.
- 72 A mixture of rock, sand and water, which becomes hard after it dries.
- 73 The energy that kinetic energy changes into when a moving object is affected by friction
- Solid state
- Boiling point
- Thermal insulators
- Calorie
- Convection
- Conduction
- Law of conservation of mass
- Steel
- Expansion
- expansion joints
- Contraction
- Thermal Energy
- Thermal insulator
- Thermal conductor
- Thermal equilibrium
- Convection
- Radiation
- Conduction
- Law of Conservation of mass
- Steel
- Cement
- Thermal energy



- 74 A form of energy stored in an object when it is placed on the top of a ramp.
- 75 A material consists of sand, limestone and soda ash

Question 05

Give reason for each of the following

- 1 Muscle cells need to be shaped like long fibers.
To allow the movement.
- 2 No system in the body can work alone.
Because all systems depend on each other to do its function
- 3 Cells must vary in shape and size.
Because each cell must be specialized to perform specific function.
- 4 The mitochondria are the powerhouses of the cell.
Because mitochondria provide the cell with its needed energy.
- 5 There is no cell membrane.
The cell cannot control the substances that enter or leave it.
- 6 The endocrine system plays an important role in the fight or flight response.
Because the endocrine system secretes hormones that control this response and affects other body systems to face that danger or to run away from it, such as:
 - Contraction of muscles.
 - Increasing the breathing rate.
 - Increasing the heartbeats.
- 7 It is possible to distinguish between plant cells and animal cells by a microscope.
Due to presence of cell wall and chloroplast in plant cell only.
- 8 Plants can make their own food.
Because it contains chloroplasts that help in making photosynthesis process.
- 9 The cell membrane has the property of selectively permeable.
To control the substances that enter or leave the cell.



Animals cannot make their own food.

10

Due to absence of chloroplasts

Chewing and breaking down food facilitates digestion process.

11

To convert the complex food into simpler substances that the body can use for energy and growth

The cell allows water to go outside it.

12

To keep the water balance on both sides of the cell membrane.

Heart muscle contracts and relaxes without stopping.

13

To allow the heart pumps the blood carrying oxygen to all the body cells.

Cardiac muscle is considered as involuntary muscle.

14

Because cardiac muscles move automatically and you cannot control their movement.

Blood cells and proteins can't pass through kidney's nephrons.

15

Because blood cells and proteins are large in size.

Undigested food become solid wastes inside the large intestine.

16

Because large intestine (colon) absorbs most of water from the undigested food.

Heart muscle relaxes and contracts.

17

To allow the heart pumps the blood carrying oxygen to all the body cells.

The cell membrane maintains the balance of water on both sides of the cell.

18

Due to presence of cell membrane.

The number of cells in the body of an adult is much greater than the number of cells in the body of the young child.

19

Because as we grow the cells increase in number not in size.

Microscope is used to see cells.

20

Because it can magnify the cells to see its structures



The cell needs energy in the form of food and oxygen.

21 To carry out all its life activities to survive and get rid of waste materials.

22 Electric generators have great importance in our life.

Because they produce electricity that is used in lighting houses and operating electrical devices.

23 The human body is considered as an electric conductor.

Because the human body contains a lot of water, which is a good conductor of electricity.

24 The Importance of the Generators.

It changes mechanical energy (kinetic energy) into electrical energy.

25 The electric circuit contains a switch.

Because it is used to close and open the circuit.

26 The electric wires are covered with rubber or plastic.

Because rubber and plastic are bad conductors of electricity to protect people from electric shock.

27 All metals are considered as electric conductors

Because they allow electric current to flow through them easily

28 Some electric circuits contain electric resistors. Or Electric stoves contain resistors.

Because resistors are used to slow the flow of electrons through an electric circuit to avoid the damage of its other components.

29 Diabetics must take regular shots of insulin

To regulate the sugar level in blood.

30 The electric circuit is considered as a system

Because the electric circuit is a path for electricity that consists of many components that work together.

31 Matter may change from one state to another.

Because the thermal energy of a matter may change causing a change in the state of matter.



- 32** Evaporation and condensation are two opposite processes.
Because matter changes from liquid state into gas state in evaporation, while it changes from gas state into liquid state in condensation.
- 33** Engineers use expansion joints in the design of bridges.
To keep bridges safe from buckling when they expand at high temperatures.
- 34** The lower part of the electric iron is made of iron
Because iron is a thermal conductor that allows heat to transfer through it.
Scientists should study the structure of molecules of different materials
- 35** To understand their chemical structures that help in understanding their properties
Smart clothes have many benefits.
- 36** Because Smart clothes can control body temperature , light up in the dark and keep themselves clean
- 37** Meteorologists must understand convection and radiation
to help them predict the weather
- A metal doorknob feels cooler than the wooden door it is on.
- 38** Because your body always generates thermal energy
A metal doorknob feels more than the wooden door, even though they are both the same temperature.
- 39** Because thermal energy transfers fast from your hand to the metal doorknob which is a thermal conductor.
Small spaces are left between the railroad tracks.
- 40** To allow the tracks to expand in hot weather without being bent to avoid train accident
- Cookware is made of aluminum
- 41** Because it is thermal conductor



Question 06

What happens if ?

- 1 Too much water enters the cell.
The cell will swell until it bursts
- 2 The microscope was not discovered.
Scientists could not discover more information about the tiny particles of cells.
- 3 There is no mitochondria inside the cell.
The cell cannot get its needed energy
- 4 There is no Cytoplasm inside the cell.
Organelles cannot float inside the cell and cannot transfer materials inside it.
- 5 There is no nucleus inside the cell.
The cell cannot form protein or be divided
- 6 There is no chloroplast in the plant cell.
It cannot make its food as it cannot make photosynthesis process
- 7 There is no vacuole in the plant cell.
It cannot store nutrients, water and waste materials inside the plant cell.
- 8 Muscle contraction and relaxation.
It causes body to move.
- 9 Diaphragm muscle contracts.
The lungs take in the air rich in oxygen gas
- 10 Heart muscle contracts and relaxes.
To allow the heart pumps the blood carrying oxygen to all the body cells.
Faced with threat or danger to heartbeats.
Heartbeats increase to pump more blood
- 11



Contraction of the front muscle in the upper arm and relaxation of the back muscle.

12

You can bend your arm

The cell wall is absent in the plant cell?

13

It will not have a definite shape.

Your body doesn't get rid of waste

14

The body will get sick.

The Nephrons of the Kidneys Not Work Properly

15

The blood will not be filtered from the waste materials and the body will get sick.

Pancreas doesn't make its function correctly.

16

The person will be infected with diabetes disease

A magnet is approached close to some iron nails mixed with small pieces of paper

17

The magnet will attract the iron nails but it will not attract the small pieces of paper.

There is no endoplasmic reticulum in the plant cell.

18

Assembling (collecting) and transporting proteins cannot be done in the cell

The brain of cyclist when he sees a dangerous situation.

19

The brain sends a signal to the muscles that contract and allow his body to face the danger.

The front muscle of the upper arm contracts.

20

You can bend your elbow(arm).

Large magnets spin at a high speed, around coiled wires.

21

An amount of electricity is produced and flows through the wires

The electric circuit doesn't contain a switch.

22

We can't open or close the electric circuit easily.

You touch non insulated wire has an electric current pass through it.

23

The electric current will flow through the body and will be shocked by electricity.



- 24 A person touches a non-insulated electric wire through which an electric current passes
The electric current will flow through his body and he will be shocked by electricity
- 25 Electric circuits in houses are connected in series.
If one light bulb blows out or is disconnected, the other light bulbs will not work
- 26 You touch a hot cup of tea. (according to the transfer of heat)
The heat transfers from the hot cup to the hand.
- 27 You heat a piece of butter. (According to change of state)
It changes from a solid to a liquid state.
- 28 The level of alcohol inside a thermometer if we put it in cold water.
The level of alcohol will go down.
- 29 Absence of expansion joints in the designed bridges.
Buckling of bridges occurs as a result of expansion at high temperatures.
- 30 The mass of a piece of butter after melting it.
The mass doesn't change.
- 31 The speed of a moving object when it is affected by friction.
The speed will decrease.
- 32 The kinetic energy of the molecules of a matter when it becomes warmer.
The kinetic energy will increase.
- 33 Making chemical change to some compounds of petroleum.
plastic will form
- 34 The iron handle was made of metal.
Heat will transfer into the handle so our hand will be hurt
- 35 Mixing sand, limestone and soda ash at high temperature
Glass will form



- 36 Pick up a hot pot with a metal handle.
Heat will transfer to the hand so it will hurt
- 37 Bridges if expansion joints are not included in the design
Buckling of Bridge occurs as a result of expansion at high temperatures
- 38 Weight an ice cube then heat it .(due to the mass off ice cube)
It will not change
- 39 You lift your face to the sun.
You will feel warm
- 40 Increase in the temperature of a body
Kinetic Energy of molecules of the body will increase
- 41 A lizard stands on a hot rock
the skin of lizard absorbs thermal energy that is released from the rock so it feels hot
- 42 Concrete is left to dry.
it becomes hard

Question 07

Answer the following questions

Explain what is meant by:

- 1 Thermal equilibrium **A condition in which the object temperature is equal to the surrounding environment**
- 2 Thermal Conductors **The materials that allow thermal energy to transfer though**
- 3 Conduction **Transfer of heat between two touching surfaces**
- 4 Selectively permeable. **It is feature that the cell membrane allows some substances to enter or leave according to its needs**
- 5 Convection **Transfer of Heat due to the movement of a liquid or gas**
- 6 Radiation **Transfer of Heat through space**
- 7 Conservation of Mass **the mass of Substance doesn't change when the substance changes from one state to another**



Cellular respiration.

It is the process that takes place inside the mitochondria, where oxygen is used to obtain the chemical energy stored in food to help the cells make their functions.

Write the function of each:

- ① Small intestine
It continues its chemical breakdown by the help of enzymes secreted into it from pancreas and gallbladder.
- wall of the small intestine absorbs nutrients through blood vessels to carry them to all the body parts.
- ② Respiratory system
It provides the body with oxygen gas and gets rid of carbon dioxide gas.
It controls the body temperature and the blood pressure.
- ③ Gallbladder in the human body
It secretes enzymes in the small intestine to break down food

Explain How are the following materials created?

- ① Steel
By mixing iron and other materials
- ② Shrink-wrap
By adding heat to plastic to make it shrink
- ③ Plastic
By making chemical changes on petroleum
- ④ Concrete
By mixing sand rocks and water.
- ⑤ Glass
By Mixing sand, limestone and soda ash.

تم بحمد الله ،



حمل الآن

مجاناً وحصرياً

المراجعة رقم (3)

الترم الاول





Question 1

choose the correct answer

Unit 1
Concept 1.1

- 1 The cell controls of water balance by passing it through.....
(a) **cell wall** (b) **cell membrane** (c) **nucleus**
- 2 The cell takes the materials it needs and uses them to get.....
(a) **waste** (b) **energy** (c) **matter**
- 3 contains only one cell.
(a) **Human body** (b) **Plants** (c) **Bacteria**
- 4 Cells need..... and..... to grow and live
(a) **Carbon dioxide – food**
(b) **Water – wastes**
(c) **Oxygen – food**
- 5 Which of the following is the smallest system in the human body?
(a) **System** (b) **Tissue** (c) **Cell**
- 6 is considered the building unit of the bodies of living organisms
(a) **The cell** (b) **Oxygen** (c) **Cell membrane**
- 7 The structure which is present in plant cell and not in animal cell.....
(a) **cell membrane** (b) **cell wall** (c) **nucleus**
- 8 Which of the following cells is the smallest in size?
(a) **plant cells** (b) **Bacterial cells** (c) **Unfertilized bird egg**
- 9 Growth of a living organism is result from increasing the..... of the cell
(a) **length** (b) **size** (c) **number**
- 10 We can see the cell ofwithout using microscope
(a) **bird's egg** (b) **human** (c) **plant**





- 11 Bacteria are considered organisms...
(a) **multicellular** (b) **acellular** (c) **unicellular**
- 12 The. surrounds each cell, protects it and regulates what can enter it.
(a) **Cytoplasm** (b) **mitochondria** (c) **Cell membrane**
- 13 Animal bodies contain a variety of cells, such as.....
(a) **muscle cells** (b) **Photosynthesis** (c) **cell wall**
- 14 A group of organs working together is.....
(a) **systems** (b) **Tissues** (c) **Cells**
- 15 The.....is used to see cell components.
(a) **microscope** (b) **telescope** (c) **lens**
- 16 All the following are from parts of microscope, except.....
(a) **eyepiece** (b) **stage** (c) **coverslip**
- 17 The organisms made up of only one cell such as.....
(a) **bacteria** (b) **plant** (c) **animal**
- 18 The organisms made up of more than one cell such as.....
(a) **plant** (b) **bacteria** (c) **unfertilized bird egg**
- 19 is inside the membrane and supports the organelles.
(a) **plasma membrane** (b) **Cytoplasm** (c) **nucleus**
- 20 The. surrounds plant cells to give them a definite shape.
(a) **Cell wall** (b) **Chloroplasts** (c) **Mitochondria**
- 21 The bodies of animals are characterized by the presence of special structures that help them keep their shape, such as.
(a) **Skin** (b) **Bones** (c) **Intestines**





- 22 One of the components of a cell that similar to an electrical power station is.....
(a) **Mitochondria** (b) **Cytoplasm** (c) **Chloroplasts**
- 23 One of the components of the cell prepares and packages materials within the cell and transports them out of the cell is.
(a) **vacuole** (b) **Golgi apparatus** (c) **Mitochondria**
- 24 contains the pigment chlorophyll, which helps it absorb the energy of sunlight to carry out the photosynthesis process.
(a) **Nucleus** (b) **Chloroplast** (c) **Mitochondria**
- 25 is considered the main control center in the cell.
(a) **Nucleus** (b) **Chloroplast** (c) **Golgi apparatus**
- 26 A type of cell that contains a cell wall and Chloroplast is..
(a) **Animal cell** (b) **Plant cell** (c) **Bacteria**
- 27 The animal cell cannot make photosynthesis process, because it doesn't have a.....
(a) **Cell membrane** (b) **chloroplasts** (c) **vacuole**
- 28 Muscle cells need to be shaped like fibers.
(a) **Short** (b) **Long** (c) **Fatty**
- 29is not consider as voluntary muscle
(a) **upper arm** (b) **Heart** (c) **neck**
- 30 The..... system receives nervous signals from the body's organs, such as the eye
(a) **Nervous** (b) **Muscular** (c) **Respiratory**
- 31 The heart is one of the organs of. system
(a) **Nervous** (b) **Circulatory** (c) **digestive**

Unit 1
Concept 1.2





- 32 When feeling nervous or exposed to a dangerous situation,
(a) Each system works separately
(b) The systems work together in an integrated system
(c) The systems do not interact with each other
- 33 The process of muscle contraction leads to.....its length.
(a) decrease (b) increase (c) no change
- 34 The..... sends instructions to muscles
(a) Heart (b) brain (c) arm
- 35 Performing simple movements such as pick up a glass of water over the table. What systems in the human body work together to perform this task?
(a) nervous and circulatory
(b) nervous and musculoskeletal
(c) nervous, circulatory and musculoskeletal
- 36 The group of similar cells work together to form.....
(a) organ (b) tissue (c) system
- 37 secretes enzymes to increase the chemical breakdown of food.
(a) stomach (b) large intestine (c) kidney
- 38 The liver stores sugar and converts it into
(a) fat (b) starch (c) glycogen
- 39 The endocrine glands secrete..... to help the body perform its function.
(a) hormones (b) salts (c) proteins
- 40 The process of absorbing nutrients begins through the capillaries in the
(a) stomach (b) large intestine (c) small intestine
- 41 When two muscles work together to make a movement, one of these muscles contracts while the other.....
(a) moves (b) contract (c) relax





42. Skeletal muscles include the muscles of.....

- (a) diaphragm (b) intestines (c) neck

43 When feeling danger...heartbeats

- (a) decrease (b) stabilize (c) increase

44 All of the following are waste materials produced by body cells through their membranes EXCEPT.....

- (a) Urine (b) Sweat (c) Feces

45 Nephrons are.....

- (a) Vessels that hold urine before it exits the body
(b) The place where urine exits the body
(c) Microscopic units that filter blood and remove waste from the body

46 The system responsible for purifying blood and filtering waste from the body is the.....

- (a) Circulatory (b) Respiratory (c) Urinary

47 The organ responsible for extracting excess water and salts in the form of sweat is

- (a) Kidney (b) Lung (c) Skin

48 The kidney is the main organ of thesystem

- (a) Nervous (b) Respiratory (c) Urinary

49 The tools that opens and closes the electric circuit is called.....

- (a) Wires (b) switch
(c) light bulb (d) Battery

Unit 1
Concept 1.3

50from electrical insulators

- (a) iron (b) aluminum
(c) wood (d) copper





- 51 The..... is used to limit the flow of electrons in an electrical circuit.
(a) Resistor (b) Switch
(c) Battery (d) bulb
- 52 The electrical wires are coated with a layer of.....
(a) Iron (b) Aluminum
(c) Plastic (d) nickel
- 53 The turbine uses the power of wind or water to generateenergy to operate electrical generators
(a) Magnetism (b) Mechanical
(c) Solar (d) Chemical
- 54 Magnets can be made from.....
(a) Copper (b) Glass
(c) Iron (d) Plastic
- 55 Theof the objects affects the force of gravity
(a) shape (b) color
(c) mass (d) volume
- 56 The factors on which gravitational force depends are.....
(a) mass and shape (b) size and shape
(c) mass and volume (d) distance and mass
- 57 The electrical insulating materials include.....
(a) rubber (b) iron
(c) copper (d) aluminum
- 58 When a piece of aluminum is replaced by a piece of wood in an electrical circuit, this causes.....
(a) current flow. (b) open the circuit
(c) close the circuit (d) lighting the lamp



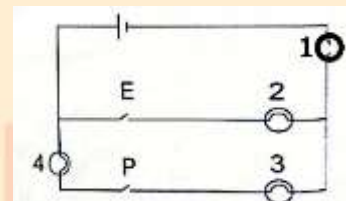


59 From the conditions for lighting a lamp in an electrical circuit is.....

- (a) the presence of a battery in the circuit only
- (b) the key is turned on only.
- (c) there is no insulating material in the circuit path only
- (d) all the previous answers.

60 Which lamps light up when switch (p) is closed in the opposite electrical circuit?.....

- (a) (3-4) only
- (b) (1-3-4).
- (c) (1-2) only
- (d) (1-2-3)



61is a magnetic material that is attracted to the magnet.

- (a) Paper
- (b) Wood
- (c) Nikel
- (d) Copper

62 The electric circuit contains a..... which is responsible for opening and closing the circuit

- (a) Battery
- (b) Switch
- (c) Lamp
- (d) generator

63is a material that cannot allow electric current to flow through

- (a) Iron
- (b) Copper
- (c) Plastic
- (d) Aluminum

64 The molecule is composed of very small particles called.....

- (a) Cells
- (b) Atoms
- (c) Mixtures
- (d) compounds

Unit 2
Concept 2.1

65 All of these substances are solids, except.....

- (a) Pen
- (b) Table
- (c) Soup
- (d) snow



- 66 Both..... and..... are examples of liquid matter
(a) water-milk (b) water-wood
(c) water copper (d) oil - paper
- 67 Particles of all the following substances have a lot of energy, except.....
(a) Oxygen (b) carbon dioxide
(c) water vapor (d) glass
- 68 Thermal energy affects..... and of a matter
(a) temperature – state (b) temperature – color
(c) color-taste (d) color-smell
- 69 The energy is related to the motion of particles of a matter
(a) Chemical (b) Potential
(c) Light (d) thermal
- 70 Heat transfers from.....
(a) a cold object to an object that has the same temperature.
(b) a hot object to an object that has the same temperature.
(c) a cold object to a hot object.
(d) a hot object to a cold object
- 71 Temperature is a measure of theenergy of molecules of a substance
(a) Kinetic (b) Potential
(c) Light (d) chemical
- 72 When the molecules of a substance gain thermal energy, their total kinetic energy..... and the temperature of the substance.....
(a) decreases - decreases (b) increases - increases
(c) decreases - increases (d) increases - decreases
- 73 Melting process is the change of substance from state to..... state
(a) solid-liquid (b) liquid - gas
(c) gas - liquid (d) liquid - solid





74 Evaporation process is the change of substance from state tostate
(a) solid-liquid (b) liquid - gas
(c) gas - liquid (d) liquid - solid

75 The transformation of gas into liquid is called.....and the reverse process is called.....
(a) melting – evaporation (b) evaporation – melting
(c) evaporation - condensation (d) condensation - evaporation

76 The state(s) of matter with the greatest amount of energy is/are.....
(a) Solid (b) Liquid
(c) gas (d) Solid and liquid

77 What molecules have the lowest kinetic energy when it is in the form of.....
(a) ice (b) water drops
(c) water vapor (d) steam

78 Changing ice into water followed by changing water into steam shows two different processes which are and.....
(a) freezing – condensation (b) evaporation - condensation
(c) melting – freezing (d) melting - evaporation

79 Objects with more thermal energy have.....kinetic energy
(a) More (b) Less
(c) the same (d) no

Unit 2
Concept 2.2

80 If you want to design a product which conducts heat well which material will you think of?
(a) Wood (b) Plastic
(c) Foam (d) Metal

81is the transfer of heat due to the movement of a liquid or gas
(a) Radiation (b) Conduction
(c) Freezing (d) Convection





- 82 Which of the following may not be a source of thermal energy?
(a) Small oven (b) The Sun
(c) Moon (d) The heater
- 83 Heat is transferred by convection in the molecules of the following substances, except.....
(a) milk (b) water
(c) air (d) iron
- 84 Sunlight and the heat of the Sun reach Earth by.....
(a) conduction (b) radiation
(c) convection (d) a, c
- 85 Heat is transferred through solids by.....
(a) radiation only (b) conduction and convection
(c) conduction only (d) radiation and convection
- 86 Meteorologists are scientists who study.....
(a) weather (b) rocks
(c) water (d) space
- 87 To make clothes we can use.....
(a) steel (b) concrete
(c) hard fabric (d) flexible fabric
- 88 Railroad tracks are made up of.....
(a) iron (b) plastic
(c) coal (d) glass
- 89 All the following are properties of steel,
(a) it is a mixture of rock and sand
(b) it is flexible material
(c) it is a mixture of iron and other elements.
(d) it lasts for a long time





Question 2

Complete the following sentences

Unit 1
Concept 1.1

- 1) Living organisms grow and reproduce by increasingtheir cells
- 2) The cells ofare smaller than plant and animal cells
- 3) An unfertilized bird egg contains numberegg cell
- 4) Thewas the first person to use the word cell.
- 5) The Cell wall of plant cell made of.....
- 6) The specialized types of plant cell performprocess
- 7) The insects have a hard, shell-like covering called.....
- 8) The green color in a plant cell is due to it contains the pigment.....
- 9) when examining transparent, colorless cells under a microscope we used
.....

Unit 1
Concept 1.2

- 10) Thepumps more blood to feed the muscles required for movement
- 11) Thesends instructions to the muscles.
- 12) To pick up a glass of water, thefirst sees the location of the book.
- 13) Hormones transmitted to all parts of the body by
- 14) During inhalation the diaphragm muscle
- 15) Glucose sugar is stored byandin the form of animal starch
- 16) Cell wall is made up ofgives the plant cell its definite
- 17) The presence ofpigment gives most plants their green color





- 18) Chlorophyll absorbs the energy ofallow the plant makes its own food by.....process
- 19) Cells of animals don't have definite shapes due to the absence of
- 20) The body of a bird hasthat give this bird its definite shape
- 21) Stomach contains anand somethat lead to more food breakdown.
- 22) Plant cell contains one bigwhich stores nutrients, water and waste materials, while animal cell contains many smallwhich do the same function as in plant cell
- 23) The muscles of heart are calledmuscles and they are considered as a type ofmuscles.
- 24) Endocrine system secretesto control the body temperature.
- 25) When you push the door out with your hand, the muscles in the back of your upper arm
- 26) In dangerous situations, the brain sends a signal to yourto contract and face the danger
- 27) Researchers work to develop the artificial pancreas to pump directly inside the body of diabetics.
- 28) Pancreas is the organ that belongs to endocrine system and helps thesystem in digestion process

Unit1
Concept 1.3

- 29) By increasing the distance between objects and the Earth's surface, the (.....) .force (.....)
- 30) Magnetism is an attraction or (.....) force , while gravity is(.....) force only
- 31) All objects are pulled toward Earth's (.....) due to (.....) Force of the earth
- 32) Gravity attracts any object that has (.....)
- 33) Materials are classified according to their ability to be attracted to the magnet into (.....) Materials and (.....-.....) Materials
- 34) Mechanical energy can be changed into(.....) energy in the generator





- 35) The electric current can transmit in a closed path called an (.....)
- 36) The tool that opens and closes the electric circuit is called (.....)
- 37) There are materials known as(.....) that allow electrons to flow through them such as(.....) and (.....)
- 38) The electric current causes(.....) in the human body as it contains (.....) that is a good conductor of electricity
- 39) Some materials are called (.....) because they don't allow electric current to flow through them like (.....) and (.....)
- 40) Rubber is an electric (.....) , while copper is an electric(.....)
- 41) Electric circuits in houses are connected in (.....) way
- 42) The heart has a natural (.....) which causing the heart to contract
- 43) To build a pacemaker (.....) , an insulated electric wire and(.....) are needed
- 44) Electric wires are coated by (.....) as it is an electric insulator
- 45) By increasing the number of loops in the coil, and moving a magnet inside it, the amount of generated electric current (.....)
- 46) A moving magnet inside a coiled wire can generate (.....)
- 47) Gravity attracts any object that has (.....)
- 48) Wind turbines need (.....) to produce electricity
- 49) Magnet can be made of (.....)
- 50) Generators convert mechanical energy into (.....) energy
- 51) The pattern that the iron filings make near the magnet is the outline of its (.....)
- 52) Electric energy transfers to the devices that are powered by electricity through (.....)





- 53) Molecule is composed of a group of (.....) bound together
- 54) Particles of (.....) move very fast, so they have the most (.....) energy
- 55) Thermal energy of a substance is the total sum of (.....) energy of its molecules and atoms
- 56) Thermal energy transfers from one substance to another if they have (.....) Temperatures
- 57) The process in which liquid changes into solid is called (.....) process, and the reverse process is called (.....) process
- 58) Matter can change from liquid state to (.....) state at low temperatures while it can change into (.....) state at high temperatures.
- 59) When the force that holds the molecules (.....) they vibrate faster, and when this force (.....) they vibrate slower
- 60) Molecules of liquid matter can move faster than molecules of(.....) matter and slower than molecules of (.....) matter
- 61) As temperature(.....) the kinetic energy of molecules increases
- 62) When we keep water inside the freezer, the state of water changes from liquid to (.....) state
- 63) A drop of food coloring added to a hot cup of water will spread out(.....) Than in cold water.
- 64) Changing of matter from(.....) state to(.....) state is called evaporation.
- 65) Conduction occurs with objects that are (.....))
- 66) Metal, such as (.....) are good conductors.
- 67) A metal doorknob feels (.....) than the wooden door it is on
- 68) When a substance changes state, the mass of the substance (.....)
- 69) Some materials prevent heat from being transferred, such (.....)
- 70) Thermal energy transfers from one place to another by(.....) and (.....)





- 71) (.....and.....) affect the rate at which heat is transferred.
- 72) Materials that allow heat to travel freely through them are called (.....)
- 73) Hot food continues to lose heat until its temperature becomes(.....)the temperature of the air surrounding it.
- 74) Temperature is a measurement of the energy of (.....) molecules of matter

Question 3

Put (true) or (false) answers

Unit1
Concept 1.1

- | | | |
|-----|--|-----|
| 1) | The number of cells is similar in plants and animals | () |
| 2) | Each cell is surrounded by a plasma membrane that protects it and regulates what can enter | () |
| 3) | Tissue are made up of a group of organs. | () |
| 4) | Human's red blood cells contain a nucleus. | () |
| 5) | New cells come from existing cells. | () |
| 6) | All cells have a cell wall. | () |
| 7) | One of the functions of the endoplasmic reticulum is helping in assembling proteins. | () |
| 8) | Plant cells are similar to animal cell in the presence of a nucleus. | () |
| 9) | Every plant cell has a cell wall and therefore does not need a cell membrane. | () |
| 10) | Animals can make their own food because of the presence of chloroplasts inside their cells. | () |
| 11) | The cell nucleus is responsible for cell division | () |
| 12) | The size of the vacuole differs between the plant cell and the animal cell. It is larger in the animal cell. | () |
| 13) | The plant cell is distinguished from the animal cell by the presence of chloroplasts and a cell wall. | () |





14)	An animal cell is similar to a plant cell in shape and structure	()
15)	The brain pumps more blood to muscles	()
16)	The two arms move due to contraction and relaxation muscles	()
17)	We can control all our muscles	()
18)	The diaphragm muscle contracts when air enters the two lungs.	()
19)	The digestion process begins in the stomach and ends in the small intestine	()
20)	The body's systems work together	()
21)	Undigested food is stored in the small intestine until it is expelled	()
22)	Involuntary muscles move automatically, their movement can't be controlled	()
23)	When the diaphragm muscle contracts, the air is expelled out from the lungs	()
24)	The circulatory system transports only hormones to all body parts	()
25)	We can see the examined sample in bigger size when using the high-power objective lens.	()
26)	Bacteria and horse are considered as multicellular organisms.	()
27)	The human body contains about 40 million cells.	()
28)	Chloroplasts are found in the cells of banana plant leaves	()
29)	The cells of monkey are surrounded by cell wall from outside	()
30)	Nucleus is found in the center of most cells	()
31)	All cell parts which are found inside the cell are floating in cytoplasm.	()

Unit1
Concept 1.2





32)	Selective permeability feature takes place through the cell wall	()
33)	Cell wall surrounds the cell membrane of animal cells	()
34)	There is one big vacuole in the cell of onion plant	()
35)	Chlorophyll is responsible for absorbing the energy of sunlight to make the food of plants	()
36)	The green color of plants is due to the presence of vacuoles in their cells.	()
37)	There are many small vacuoles in the cells of a bird	()
38)	Exoskeleton gives some insects their shapes	()
39)	Cells of human don't have definite shape due to the absence of cell membrane	()
40)	The horse can make its own food due to the presence of chloroplasts in its cells	()
41)	Cells are very large as the diameter of animal cell is about 0.001 cm	()
42)	The 3D microscope can help doctors to treat cancer disease.	()
43)	All systems in your body work together in an integrated way	()
44)	Blood cells and proteins pass through nephrons	()
45)	The digestive system is involved in the excretion process	()
46)	The skin is not considered an excretory organ in the body	()
47)	Metallic spoon from conductors	()
48)	When placing an insulator in the electrical circuit Electricity flows.	()
49)	Electrical resistance is found in some devices, such as electric stoves.	()

Unit1
Concept 1.3





50)	The house electrical circuit is connected in parallel.	()
51)	An electric current is generated when a static magnet is placed inside a coil.	()
52)	Electricity is considered a form of energy	()
53)	When a light bulb connected in series burns out, all the other of the light bulbs are turned off	()
54)	The switch is the source of electricity in an electric circuit	()
55)	The magnet attracts all materials	()
56)	An electric shock happens when touching non- insulated wire that an electric current flows through	()
57)	Magnetism is an attraction or repulsion force, while gravity is a repulsion force only	()
58)	The electric devices in houses are connected in series circuits	()
59)	The artificial pacemaker should contain a battery to do its function	()
60)	Magnets can be made of iron.	()
61)	In the series circuits, the electric current can flow in different branches	()
62)	The natural pacemaker inside the heart produces electrical currents to make it contracts.	()
63)	The magnet has a force called magnetism	()
64)	The thermostat in a refrigerator contains an automatic switch	()
65)	Cobalt is an example of magnetic materials.	()
66)	The natural pacemaker inside our heart produces electrical currents to make it stops	()
67)	Matter can be changed from one state to another	()

Unit2
Concept 2.1



68)	Glass can be melted at very low temperatures.	()
69)	All matter contain thermal energy	()
70)	The movement of particles within an object is used to describe the thermal energy.	()
71)	Substances in gas form have the least thermal energy	()
72)	All forms of matter are made of particles that are in a state of motion	()
73)	Gases have variable shape and volume.	()
74)	Heat flows from a hotter substance to a colder substance	()
75)	If you hold a hot cup of tea with your hand, heat transfers from your hand to the cup	()
76)	Molecules of solids move faster than molecules of liquids	()
77)	By increasing the thermal energy of the molecules of matter, the force that holds these molecules increases	()
78)	The transformation of solid to liquid is called melting and the reverse process is called freezing	()
79)	When the temperature of a matter increases, its molecules move slower	()
80)	Hot water molecules have more kinetic energy than cold water	()
81)	Food coloring (dye) spreads out in cold water faster than in hot water	()
82)	Temperature is a measure of the average kinetic energy of the molecules of a matter	()
83)	By decreasing the thermal energy, the kinetic energy increases	()
84)	Kinetic energy is the energy of motion	()
85)	We can measure the temperature by using thermometers	()





86)	Thermal energy transfer can occur in only two ways.	()
87)	Sunlight and heat reaching Earth is an example of thermal radiation.	()
88)	The final temperature is greater than the temperature of two bodies in contact	()
89)	Thermal energy is destroyed when it is transferred from one body to another	()
90)	Thermal energy is transferred in metals by radiation	()
91)	The transfer of heat between two bodies stops when the temperature of each is the same	()
92)	Metals such as copper and iron allow heat to travel freely through them	()
93)	Plastic often resists burning	()
94)	In electric iron heat transfers from cloth to iron	()
95)	Transfer of heat due to the movement of a liquid or gas is called radiation.	()
96)	Some material, such wood, prevent heat from being transferred.	()
97)	Holding your hands in front of a fire to warm them is an example of radiation	()
98)	When a substance changes state, the mass of the substance does not change	()
99)	cool object does not contain any energy inside it.	()
100)	We feel the heat but we cannot see it.	()
101)	Heat cannot be lost, only transferred	()
102)	When we touch the snow, we feel cold because the coldness is transferred from the snow to our hands	()





Question 4

Write what the following sentence indicate

Unit 1
Concept 1.1

1)	The building unit of life on Earth	()
2)	The membrane which allows water to enter and leave the cell.	()
3)	The living organisms that their bodies consists of many cells	()
4)	A tool used to see the components of the cell	()
5)	Living organism which contains cell wall in the structure of their cell	()
6)	The organelle responsible for controlling cell activities, such as the making cells proteins	()
7)	The gelatinous liquid inside the cells and supports the cell organelles	()
8)	The process of using oxygen to obtain chemical energy from food so that cells can continue its function.	()
9)	The powerhouses of the cell.	()
10)	A structure within the cell that has a special function	()
11)	Living organisms with more than one cell	()
12)	A group of tissues jointed together and involved in performing a particular function	()
13)	It surround the plant cell to get definite shape	()
14)	Sac like structures used for storage of nutrients, water, and waste; in plant cells.	()
15)	The organelle that package materials within the cells and transported them out of the cell.	()
16)	Organelles that helps in assembling and transporting proteins to build and repair the cell	()





17)	Cells need to be shaped like long fibers, which allows for movement	()
18)	The organelle which provide the cell with the energy it needed	()
19)	A system that made up of bones, ligaments, tendons, and cartilage	()
20)	A stain that is used to color the nucleus of the cell in blue color	()
21)	They are scientist who study cells	()
22)	A system which helps the body to move	(Unit 1 Concept 1.2)
23)	The organ that pumps more blood to feed the muscles required for movement	()
24)	The organ that sends instructions to the muscle	()
25)	A system consisting of mouth , stomach and small intestine	()
26)	A fluid secreted in the mouth that helps digest food	()
27)	A system of organs and tissues that helps the body breathe	()
28)	A muscle that pumps oxygenated blood to every cell.	()
29)	A muscular opening at the end of the rectum through which food waste is expelled	()
30)	The main organ of the respiratory system	()
31)	A system that converts complex nutrients into simple substances in the human body	()
32)	Cells need to be shaped like long fibers, which allows for movement	()
33)	A system that made up of bones, ligaments, tendons, and cartilage	()
34)	The cell which able to store and use energy quickly.	()





35)	Hormone produced from pancreas and regulates the amount of sugar in the blood	()
36)	The system which responsible for storing wastes and get rid of them.	()
37)	An organ plays very important role in the urinary system.	()
38)	The pattern formed by iron filling near the magnet	()
39)	Small electric charges moving in the wires in a closed electrical circuit	()
40)	The force of Earth which attracts all objects on its surface to its center	()
41)	A tool which is used to open and close the electric circuit	()
42)	A device inserted into the chest to stimulate the heart to beat regularly	()
43)	The area around the magnet in which its magnetic force appears	()
44)	The force that allows the magnet to attract some materials without making direct contact	()
45)	The materials that are attracted to the magnet.	()
46)	The materials that are not attracted to the magnet	()
47)	The device which converts mechanical energy into electrical energy	()
48)	A form of energy that is produced from generators and turbines	()
49)	The flow of electrons through an electric wire	()
50)	A closed loop which electric current can flow through	()
51)	One of the components of an electric circuit that is used to limit the flow of electricity through the circuit.	()
52)	The type of electric circuits in which all components must be connected in one loop	()

Unit 1
Concept 1.3





53)	The type of electric circuits that is found in houses and help in operating many devices at the same time.	()
54)	A device can be used to detect the flow of electric currents	()
55)	It is used to adjust the temperature inside some devices such as the refrigerator	()
56)	The materials that the electric charges can flow through	()
57)	They are materials that donot allow electric current to flow through.	()
58)	The two factors that affect the force of gravity (gravitational force).	()
Unit 2 Concept 2.1		
59)	It is a measure of the sum of kinetic energy of molecules and atoms of a substance.	()
60)	It is the change of matter from solid state to liquid state	()
61)	It is the change of matter from liquid state to gas state	()
62)	It is the change of matter from gas state to liquid state	()
63)	It is the change of matter from liquid state to solid state	()
64)	A process in which liquid molecules move faster and change to another state	()
65)	A process in which liquid molecules move slower and change to another state	()
66)	It is the smallest building unit of matter	()
67)	It is a group of atoms bound together	()
68)	The state of matter at which its particles have the most thermal energy	()
69)	The state of matter that has fixed volume and shape	()
70)	The process of shaping a mass of molten glass by blowing air into it through a hollow tube	()





71)	A device used to measure the temperature	()
72)	A mixture of rock, sand and water which becomes hard after it dries	()
73)	The mass of a substance doesn't change when this substance changes from one state into another	()
74)	They are materials that slow down the heat transfer through them	()
75)	It occurs when heat transfer stops between two objects reach the same temperature	()
76)	Transfer of Heat due to the movement of a liquid or gas	()
77)	Heat travels through space	()
78)	Transfer of Heat when objects that are touching.	()
79)	The materials that help transfer heat.	()
80)	When a substance changes state, the mass of the substance does not change.	()
81)	Energy transferred from a hot object to a cold object.	()
82)	Materials that resistance to the transfer of heat energy.	()
83)	Materials that allow heat to flow through them	()
84)	A condition in which the object temperature is equal to the surrounding environment	()
85)	Unit of temperature measurement	()





Question 5

Give reason for the following

Unit1
Concept 1.1

1. The mitochondria are the powerhouses of the cell.
.....
2. It is possible to distinguish between plant cells and animal cells by a microscope
.....
3. The cell membrane has the property of selectively permeable
.....
4. Plants can make their own food.
.....
5. Cats are considered as multicellular organisms
.....
6. Animals cannot make their own food.
.....
7. The plant cell has a definite shape, while the animal cell does not.
.....

Unit1
Concept 1.2

8. People whose kidneys are not working well may get harmed
.....
9. No system in the body can work alone to do a simple task.
.....
10. Skeletal muscles are considered as voluntary muscles
.....
11. Muscle cells need to be shaped like long fibers
.....
12. Some diabetics use insulin pump device
.....
13. Important of respiratory system in excretion process
.....
14. The endocrine system plays an important role in the fight or flight response.
.....
15. Undigested food becomes solid wastes inside the large intestine
.....

Unit1
Concept 1.3



16. The electric circuit is considered as a system

.....

17. Electric wires are made of copper

.....

18. The electric circuit must contain a battery

.....

19. Some electric circuits contain resistors

.....

20. When a ball is thrown into the air, it will stop moving upward and then falls down

.....

21. Electric wires are wrapped in plastic

.....

22. Electric generators have great importance in our life.

.....

23. In the parallel circuit, we can turn off or remove one light bulb while the other light bulb will remain lit

.....

24. All metals are considered as electric conductors

.....

25. When a magnet is moved rapidly back and forth inside a coil, the needle of the galvanometer connected to the coil moves rapidly

.....

26. Cobalt and nickel are considered as magnetic materials

.....

27. Gravity and magnetism are different from the other forces

.....

28. Wood and copper are not attracted to the magnet

.....

29. Particles of steam have higher thermal energy than particles of water

.....

30. Ice melts when it is put in a hot cooking pan.

.....

Unit2
Concept 2.1





31. Evaporation and condensation are two opposite processes

.....

32. Food coloring takes less time to spread out in the hot water than in cold water

.....

Unit2
Concept 2.2

33. You feel heat, when you touch a metal spoon placed in a hot cup of tea

.....

34. Meteorologists must understand convection and radiation?

.....

35. A metal doorknob feels more than the wooden door, even though they are both the same temperature

.....

36. Hot dinner plates cool when placed on the dining table.

.....

37. Cookware is made of aluminum

.....

38. We do not feel the thermal energy in cold objects.

.....

Question 6

What happen when

Unit 1
Concept 1.1

1. There is no cell membrane.

.....

2. Too much water enters the cell.

.....

3. The microscope is not discovered.

.....

4. There is no nucleus inside the cell.

.....

5. There is no Cytoplasm inside the cell.

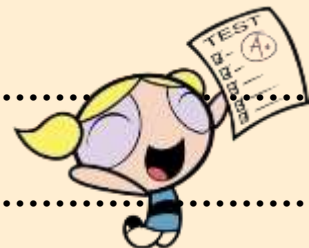
.....

6. There are no mitochondria inside the cell.

.....

7. There is no vacuole in the plant cell.

.....





8. There is no chloroplast in the plant cell.

.....

9. There is no endoplasmic reticulum in the plant cell

.....

10. Muscle contraction and relaxation

Unit 1
Concept 1.2

.....

11. Diaphragm muscle contracts

.....

12. Heart muscle contracts and relaxes.

.....

13. faced with threat or danger to heartbeats

.....

14. There is no muscular system in the human body

.....

15. Circulatory system cannot transmit the nutrients to the nerve cells

.....

16. Aluminum foil is used to wrap electric wires

Unit 1
Concept 1.3

.....

17. A patient has a slow or irregular heartbeats.

.....

18. A magnet is moved rapidly inside a coil of wire in a circuit containing galvanometer

.....

19. Electric circuits in houses are connected in series

.....

20. People have diabetes

.....

21. Large magnets spin at a high speed, around coiled wires.

.....

22. The switch is turned on in the electric circuit

.....

23. The distance between an object and Earth's center increases

.....

24. Put the iron nail at the 0 cm of the ruler and put the magnet at the other end of the ruler

.....





25. the distance between objects and the center of the Earth, decreases

Unit2
Concept 2.1

26. The state of glass when it is heated at very high temperatures

27. You hold a piece of frozen chocolate in your hand. (According to transfer of heat)

28. You touch a hot cup of tea. (According to transfer of heat).

29. You heat a piece of butter. (According to change of state).

30. The speed of molecules of a matter when it is heated

31. Bridges if engineers don't use expansion joints in their design

32. The level of alcohol inside a thermometer if we put it in hot water

33. The level of alcohol inside a thermometer if we put it in cold water

34. The spaces between molecules of a matter if we heat it.

35. The size of an inflated balloon if it is placed in hot weather.

36. The volume of matter when it is cooled

37. The mass of a piece of butter after melting it

Unit2
Concept 2.2

38. Molecules' movement of a hotter substance after mixing it with a cooler substance.

39. you lift your face to the sun ?

40. weight an ice cube then heat it.(due to the mass off ice cube)

41. Pick up a hot pot with a metal handle



42. The iron handle was made of metal.

43. A lizard stands on a hot rock

44. Increase in the temperature of a body.

Question 7

Cross the odd word

1)	Human-Fish-Plant-Bacteria	.....
2)	Urine - Oxygen gas - Carbon dioxide - Sweat	.....
3)	Plastic - Copper - Iron – Aluminum	.....
4)	Air-Copper - Wood - Glass	.....
5)	Oil - Milk - Iron – Vinegar	.....
6)	Conduction-Convection - Friction - Radiation	.....

Question 8

Various questions

1. Look at the opposite figures, then answer the following questions

This figure represents Label the diagram

1.
2.
3.
4.





2. Look at the opposite figures, then answer the following questions This figure representssystem

1.
2.
3.
4.



3. Look at the opposite figures, then answer the following questions This figure represents

1.
2.



4. Look at the opposite figures, then answer the following questions this figure representssystem

1.
2.



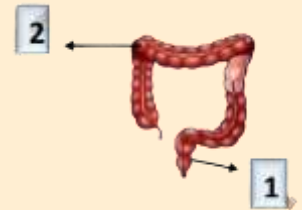
5. Look at the opposite figures, then answer the following questions

- The heart is from thesystem
- What happens to the heart when the human body faced to danger?



6. Look at the opposite figures, then answer the following questions

- 1- The number (1) indicates.....
- 2- The number (2) indicates
- 3- write function of number (2)



7. Look at the opposite figures, then answer the following questions

- 1- Muscle number (.....) is a relaxed muscle.
- 2- Muscle number(.....) is a contracted muscle



8. classify the following materials into magnetic materials and non-magnetic materials in the table





(plastic spoon - piece of glass- copper wire - iron nail)

magnetic materials	non-magnetic materials
.....	
	
	

9. Look at the following figures, then answer

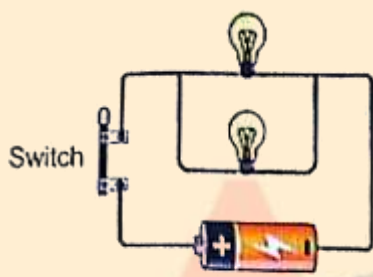


Figure (A)

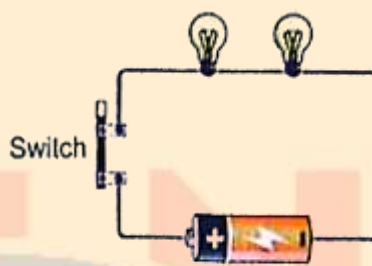


Figure (B)

a. Choose:

1. Which of these figures is a series circuit?

(a) **Figure (A)**(b) **Figure (B)**

2. Which of these figures is a parallel circuit?

(a) **Figure (A)**(b) **Figure (B)**

b. Put (✓) or (X):

1) If we remove a lamp from the circuit in figure (A), the
other lamp will still be lit

2) If the switch in figure (B) is replaced by a metallic paper clip, all lamps will turn off

10. Look at the opposite figure, then answer:

- Classify the following materials into materials that will close the circuit and others will not close it?

And giving reason?

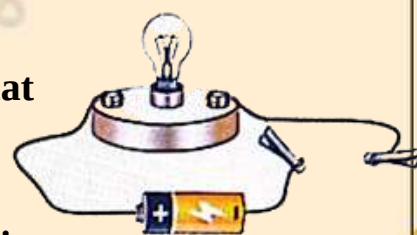
(Iron nail - Plastic spoon - Piece of rubber - Metallic spoon - Piece of wood - Metallic key)

1) The materials which will close the circuit:

-
- The reason:
-

2) The materials which will not close the circuit

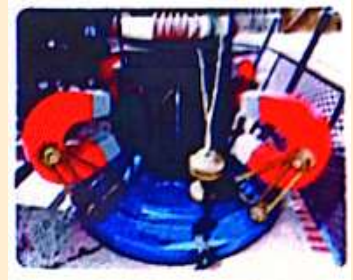
-





- The reason
-

11. Look at the opposite figure, then answer:



1. This device is called (.....)
 2. This device consists of (.....) and (.....)
 3. The idea of work of this device is changing (.....) energy into (.....) energy.
 4. This device is used in (.....) and (.....)
12. Look at the opposite figure, then answer the questions :

a. Label the figure

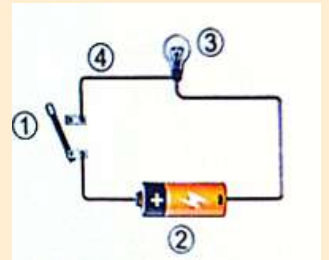
(1)	.....	(2)	.....
(3)	.....	(4)	.....

b. What is the function of components number 1 and 2?

- Component 1:
- Component 2:

c. What happens if component number 1 is closed?

-



13. Look at the opposite picture, then choose the correct answer

1) In this picture, glass changes from..... state tostate.

(a)	liquid - solid
(b)	liquid-gas
(c)	solid - liquid



2) The main energy on which the manufacture of glassware depends on is the energy

(a)	thermal	(b)	chemical	(c)	sound
-----	---------	-----	----------	-----	-------

3) When the piece of glass which is found in this picture is cooled, the glass returns back into itsstate.

(a)	Solid	(b)	Liquid	(c)	gas
-----	-------	-----	--------	-----	-----

Pilot test (1)

First question: A-Choose the correct Answer

1-A living organism grow and reproduce by increasing..... the of its body cells





Question 1

choose the correct answer

1. cell membrane	31. Circulatory	61. Nikel
2. energy	32. The systems work together in an integrated system	62. Switch
3. Bacteria	33. decrease	63. Plastic
4. Oxygen – food	34. brain	64. Atoms
5. Cell	35. nervous, circulatory and musculoskeletal	65. Soup
6. The cell	36. tissue	66. water-milk
7. cell wall	37. stomach	67. glass
8. Bacterial cells	38. glycogen	68. temperature – state
9. number	39. hormones	69. thermal
10. bird's egg	40. small intestine	70. a hot object to a cold object
11. unicellular	41. relax	71. Kinetic
12. Cell membrane	42. Neck	72. increases - increases
13. muscle cells	43. increase	73. solid-liquid
14. systems	44. Feces	74. liquid - gas
15. microscope	45. Microscopic unit that blood and remove waste from the body	75. condensation - evaporation
16. coverslip	46. urinary	76. gas
17. bacteria	47. skin	77. ice
18. plant	48. urinary	78. melting - evaporation
19. Cytoplasm	49. switch	79. More
20. Cell wall	50. wood	80. Metal
21. Bones	51. Resistor	81. Convection
22. Mitochondria	52. Plastic	82. Moon
23. Golgi apparatus	53. Mechanical	83. Iron
24. Chloroplast	54. Iron	84. radiation
25. Nucleus	55. mass	85. conduction only
26. Plant cell	56. distance and mass	86. weather





27. chloroplasts	57. rubber	87. flexible fabric
28. Long	58. open the circuit	88. iron
29. Heart	59. all the previous answers.	89. it is a mixture of iron and other elements.
30. Nervous	60. (1,3,4)	

Question 2

Complete the following sentences

1. number	2. bacteria	3. one
4. Robert hock	5. cellulose	6. photosynthesis
7. exoskeletal	8. chlorophyll	9. methylene blue dyes(satins)
10. heart	11. brain	12. eye
13. circulatory system	14. contraction	15. liver and muscle
16. cellulose , shape	17. chlorophyll	18. sunlight, photosynthesis
19. cell wall	20. bones	21. acid, enzymes
22. sap vacuole, vacuoles	23. cardiac , involuntary	24. hormones
25. relaxes	26. muscles	27. insulin
28. digestive	29. Gravitational ,decrease	30. repulsion , attraction
31. center, gravitational	33. magnetic , non-magnetic	34. electrical
32. mass		
35. electric circuit	36. switch	37. conductors, copper, aluminum
38. electric Shock, water	39. insulators , plastic , wood	40. insulator , conductor
41. Parallel	42. pacemaker	43. battery , motherboard
44. plastic	45. increase	46. electricity
47. mass	48. wind	49. iron
50. electrical	51. magnetic field	52. wires



53. atoms	54. gases , thermal	55. kinetic
56. different	57. freezing , melting	58. solid , gas
59. decreases , increases	60. solid , gas	61. increase
62. solid	63. faster	66. Iron and Nickel
	64. liquid, gas	
	65. Touching each other	
67. Cooler	68. Doesn't change	69. Plastic
70. Conduction ,convection and radiation	71. Temperature difference and surface area	72. Thermal conductors
73. Equal	74. Kinetic(motion)	

Question 3

Put (true) or (false) answers

1. ✖	2. ✓	3. ✖
4. ✖	5. ✓	6. ✖
7. ✓	8. ✓	9. ✖
10. ✖	11. ✓	12. ✖
13. ✓	14. ✖	15. ✖
16. ✓	18. ✓	19. ✖
17. ✖		
20. ✓	21. ✖	22. ✓
23. ✖	24. ✖	25. ✓
26. ✓	27. ✖	29. ✖
	28. ✓	
30. ✓	31. ✓	32. ✖
33. ✖	34. ✓	35. ✓
36. ✖	37. ✓	38. ✓
39. ✖	40. ✖	41. ✖
42. ✓	43. ✓	44. ✖
45. ✖	46. ✖	47. ✓
48. ✖	49. ✓	50. ✓
51. ✖	52. ✓	53. ✓



54. ✗	55. ✗	56. ✓
57. ✗	58. ✗	59. ✓
60. ✓	61. ✗	62. ✓
63. ✓	64. ✓	65. ✓
66. ✗	67. ✓	68. ✗
69. ✓	70. ✓	71. ✗
72. ✗	73. ✓	74. ✓
75. ✗	76. ✗	77. ✓
78. ✓	79. ✗	80. ✓
81. ✗	82. ✓	83. ✗
84. ✓	85. ✓	86. ✗
87. ✓	88. ✗	89. ✗
90. ✗	91. ✓	92. ✓
93. ✓	94. ✗	95. ✗
96. ✓	97. ✓	98. ✓
99. ✗	100. ✓	101. ✓
102. ✗		

Question 4

Write what the following sentence indicate

1. (the cell)	2. (cell membrane)	3. (Animals ,plant and, humans)
4. (microscope)	5. (plants)	6. (nucleus)
7. (cytoplasm)	8. (cellular respiration)	9. (mitochondria)
10. (organelles)	11. (multicellular)	12. (organs)
13. (cell wall)	14. (sap vacuole)	15. (Golgi apparatus)
16. (endoplasmic reticulum)	17. (muscle cells)	18. (mitochondria)
19. (musculoskeletal system)	20. (methylene blue)	21. (cell biologists)
22. (musculoskeletal system)	23. (Heart)	24. (Brain)
25. (Digestive system)	26. (saliva)	27. (Respiratory system)
28. (Heart)	29. (Anus)	30. (Two lungs)





31. (Digestive system)	32. Muscle cells	33. Musculoskeletal
34. Muscle cell	35. insulin hormones	36. Excretory system
37. (Kidney)		
38. Magnetic field	39. Electrons	40. Gravity
41. Switch	42. Pacemaker	43. Magnetic field
44. Magnetism	45. Magnetic materials	46. Non-magnetic materials
47. Generator	48. Electrical energy	49. Electric current
50. Electric circuit	51. Resistor	52. Series circuit
53. Parallel circuit	54. Galvanometer	55. Thermostat
56. Electric conductors	57. Electric insulators	58. Mass, distance
59. Thermal energy	60. Melting process	61. Evaporation process
62. Condensation process	63. Freezing process	64. Evaporation process
65. Condensation process	66. Atom	67. Molecule
68. Gas state	69. Solid state	70. Glass blowing
71. Thermometer	72. Concrete	73. The law of conservation of mass
74. Thermal insulators	77. Radiation	78. Conduction
75. Thermal equilibrium		
76. Convection		
79. Thermal conductors	80. the law of conservation of mass	81. Heat(thermal energy)
82. Thermal insulators	83. Thermal conduction	84. Thermal equilibrium
85. Calorie (Degree)		

Question 5

Give reason for the following

1. Because mitochondria provide the cell with its needed energy
2. Because plant cells have cell wall and chloroplasts and sap vacuole that not found in animal's cells
3. Because it controls the movement of substance enter and leave the cell
4. Because the plant has chloroplast that help it in photosynthesis process
5. Because the cat body consist of many cells
6. Because animals cell doesn't have chloroplast
7. Because the plant cell has cell wall, but animals not contain





8. Because their kidneys cannot filter the blood from waste materials
9. Because all system depends on each other to do its function and all of them work together
10. Because skeletal muscles are muscles can control their movement
11. Because it helps body movement by contraction and relaxation of muscle
12. To inject their bodies with insulin automatically
13. Because it gets rid of carbon dioxide gas as waste materials out of body
14. Because the endocrine system produces hormones to help the body prepare to respond to danger
15. Because large intestine absorbs most of water from the undigested food
16. Because electric circuit is a path for electricity that consists of many components that work together as one system
17. Because copper is an electric conductor that allow electric current to flow through
18. Because the battery is the source of electricity in the electric circuit
19. Because resistors are used to slow the flow of electrons through an electric circuit to avoid the damage of its components
20. Due to the gravity force of Earth
21. Because plastic is electric insulator doesn't allow electricity to pass through
22. Because, generator change Mechanical energy into electrical energy which use to lightening house and operating device
23. Because in parallel circuit the electric current can flow along different branches
24. Because metals allow electric current to flow through them
25. Because the electric current is produced inside coil
26. Because they attract to the magnets
27. Because ,Gravity is pulling force only but magnetism is pulling and pushing force
28. Because wood and copper are non-magnetic materials
29. Because particles of gas move very fast so they have the most thermal energy
30. Because thermal energy transferred from hot cooking pan to ice
31. Because in evaporation matter change from liquid to gas and in condensation the matter change from gas to liquid





32. Because the hot water has more thermal energy, so molecules of hot water have more kinetic energy and move faster
33. Because the metal spoon is a thermal conductor material that allow heat to transfer through it
34. Because it helps them predict the weather
35. Because, our body always generates thermal energy and thermal energy transfer through metal fast which is thermal conductor
36. Because heat transfer from hot dinner plates to the cold air around it
37. Because, Aluminum is good conductor of heat
38. Because, heat transfer from hotter object to colder object

Question 6

What happen when

- 1) The cell cannot control the substance that enter or leave it
- 2) The cell swell until it bursts
- 3) They could not discover more information about the tiny particles like the cell
- 4) The cell would not produce proteins and cannot make cell division
- 5) The organelles would not have a supporting medium to float on it and would not do their function
- 6) The cell would not produce energy through cellular respiration and will die
- 7) The cell would not store water, nutrients, waste materials
- 8) The cell cannot make its own food through photosynthesis process
- 9) The cell cannot collect and transport proteins inside the cell and cannot repair it
- 10) The muscle will make movement
- 11) The lungs take in the air rich in oxygen gas
- 12) The heart will pump blood through the all body system
- 13) The heart begins to beat quickly so the heartbeats increasing and heart pumps more blood to the muscles and blood pressure increase
- 14) The body cannot do the function of movement
- 15) The nerve cells cannot do their function
- 16) The human will get electric shock when hold the electric wire Bec. aluminum is electric conductor
- 17) The heart muscle will not beat at regular intervals for patient





- 18) The needle of the galvanometer moved rapidly to both sides so the generated electric current increase
- 19) The electric current can flow along one path only and when one light bulb blows out the other light bulb will turn off
- 20) They must monitor the level of sugar in blood by take shots of insulin or use insulin pump
- 21) The spinning magnets generate electrical charges on the coiled wires
- 22) The electric current flow through the circuit
- 23) The gravitational force will decreases
- 24) the magnet cannot attract the iron nail
- 25) The gravitational force will increases
- 26) it changes from solid state into liquid state
- 27) Heat transfers from my hand to the chocolate so it melts
- 28) Heat transfers from the cup to my hand
- 29) The piece of butter changes from solid state into liquid state.
- 30) the speed of molecules will increase
- 31) Buckling of bridges occurs as a result of expansion at high temperatures
- 32) The level of alcohol will rise up
- 33) The level of alcohol will go down
- 34) The spaces will increase
- 35) The inflated balloon size will increase.
- 36) The matter volume will decrease
- 37) The mass does not change
- 38) Molecules of hotter substance will move slower after mixing
- 39) You will feel the heat of the sun due to transfer heat by radiation
- 40) The mass doesn't change
- 41) Our hand will hurt due to metal is thermal conductors
- 42) Our hand will hurt when touch it due to metal is god conductors of heat
- 43) The skin of lizard absorbs thermal energy that release from rock
- 44) The kinetic energy of its molecules increases this can lead to expansion and

Question 6

Cross the odd word

- | | |
|------------|--------------|
| 1-bacteria | 2-oxygen gas |
| 3-plastic | 4-copper |
| 5- iron | 6-friction |





Question 7

Various questions

1. Look at the opposite figures, then answer the following questions

This figure represents animal cell Label the diagram

1. Nucleus
2. cytoplasm
3. mitochondria
4. cell membrane

2. Look at the opposite figures, then answer the following questions This figure represents digestive system

1. stomach
2. large intestine
3. small intestine
4. rectum

3. Look at the opposite figures, then answer the following questions This figure represents microscope

1. eyepiece
2. objective lenses

4. Look at the opposite figures, then answer the following questions this figure represents respiratory system

1. two lungs
2. diaphragm muscle

5. Look at the opposite figures, then answer the following questions

1- The heart is from the circulatory system

2- The heart begins to beat quickly so the heartbeats increasing and heart pumps more blood to the muscles and blood pressure increase

6. Look at the opposite figures, then answer the following questions

1- The number (1) indicates Rectum

2- The number (2) indicates large intestine

3- absorb water from food to become solid waste





7. Look at the opposite figures, then answer the following questions

1- Muscle number (1) is a relaxed muscle.

1- Muscle number (2) is a contracted muscle

8. classify the following materials into magnetic materials and non-magnetic materials in the table

magnetic materials	non-magnetic materials
<u>-iron nail</u>	<u>-wooden clip</u> <u>-plastic spoon</u> <u>copper wire</u>

9. Look at the following figures, then answer

A. Choose:

1. Figure (B)

2. Figure (A)

B. Put (✓) or (X): 1-✓ 2-×

10. Look at the opposite figure, then answer:

1. iron nail-metallic spoon-metallic key

• because they are electric. conductors

2. plastic. spoon-piece of rubber piece of wood

• because they are electric insulator

11. Look at the opposite figure, then answer:

1. This device is called (electric generator)

2. This device consists of (large magnets) and (coiled wires)

3. The idea of work of this device is changing (mechanical) energy into (electrical) energy.

4. This device is used in (lighting houses) and (operating electrical devices.)

12. Look at the opposite figure, then answer the questions :

A. Label the figure

(1) <u>Switch</u>	(2) <u>Battery</u>
(3) <u>Light bulb</u>	(4) <u>Metal wire.</u>

B. What is the function of components number 1 and 2?

• Component 1: It is used to open and close the circuit.

• Component 2: It is the source of electricity in the circuit.

C. The electric current flows through the circuit, and the light bulb will light up



13. Look at the opposite picture, then choose the correct answer

1. (c) solid – liquid
2. (a) thermal
3. (a) Solid



ف يوم هتعرف
سبب كل حاجة
مصلتك
وصدقني هتكون
مُمتن جدًا،
اختيارات ربنا هي
افضل سيناريو كان
ممكن يحصل



حمل الآن

مجاناً وحصرياً

المراجعة رقم (4)

الترم الاول





Final Revision

★ (1) Write the scientific term:

Mr. Ahmed Elbasha

- 1) The main building unit of the living organism's body that can do all its vital processes. (.....)
- 2) Muscles that move automatically and we cannot control their movement. (.....)
- 3) The temperature at which matter changes from liquid state to gas state. (.....)
- 4) They are materials that slow down the heat transfer. (.....)
- 5) The state of matter which changes into liquid state by heating. (.....)
- 6) The materials that are attracted to the magnet. (.....)
- 7) The organ that controls the level of sugar in the human body. (.....)
- 8) The movement of charged particles through a conducting wire. (.....)
- 9) A group of tissues does a special function. (.....)
- 10) A system which secretes hormones that help the body to respond in different situations. (.....)
- 11) A device for generating electricity by using magnets. (.....)
- 12) Way of transferring heat through liquids and gases. (.....)
- 13) A device inserted into the chest of human body to stimulate the heart to beat regularly. (.....)
- 14) The way by which the heat is transferred through solid only. (.....)
- 15) It is the measuring unit of heat. (.....)
- 16) The state of matter at which its particles have the most thermal energy. (.....)

- 17) They are cell organelles that provide the cell with its needed energy. (.....)
- 18) It is often located at the center of the cell (.....)
- 19) Component of cell that allows water to enter and exit the cell (.....)
- 20) The materials that the electric charges can flow through. (.....)
- 21) A hormone that controls the level of sugar in the human body. (.....)
- 22) It surrounds the plant cell to give it a definite shape (.....)
- 23) The area around the magnet in which its force appears (.....)
- 24) A device used to measure the temperature. (.....)
- 25) They are living organisms, and their bodies consist of more than one cell (.....)
- 26) A device can be used to magnify cells, so we can see them. (.....)
- 27) It is a group of organs that perform a specific function. (.....)
- 28) The structure that controls cell division and other cell activities. (.....)
- 29) The system that is responsible for eliminating carbon dioxide from the body. (.....)
- 30) It is a closed loop for transmitting an electric current. (.....)
- 31) It's a device used to detect a small electrical current in a circuit (.....)
- 32) It is the total sum of the kinetic energy of a substance's atoms and molecules (.....)
- 33) It's the process of changing a substance from a liquid into a solid (.....)
- 34) It's the process of changing substance from a liquid into a gas. (.....)
- 35) It is the transfer of heat through space or air. (.....)

13. The organ which is responsible for secreting insulin hormone is

- a. stomach. b. liver. c. pancreas. d. mouth.

14. The area around the magnet in which magnetic force appears is

- a. gravity. b. electric current.
c. electric conductor. d. magnetic field.

15. Heat transfers through copper and iron by

- a. radiation only. b. radiation and convection.
c. conduction only. d. conduction and convection.

16. The is used in electric circuit to limit the flow of electric current.

- a. electromagnet b. resistor c. dynamo d. motor

17. When a thermometer is put in a hot water, the alcohol inside it will

- a. expand. b. contract. c. decrease. d. not affect.

18. The object that has more thermal energy, has kinetic energy

- a. less b. the same c. more d. zero

19. The heat transfers through solids by

- a. radiation. b. conduction.
c. convection. d. radiation and convection

20. The plant cell is surrounded by

- a. cell membrane. b. cell wall. c. cytoplasm. d. nucleus.

21. All the following are electric insulators, except

- a. wood. b. plastic. c. rubber. d. copper.

22. The forearm moves toward the shoulder when the muscle in the front

- a. relaxes. b. contracts.
c. relaxes and contracts. d. doesn't move.

23. Which of the following provide the cells with energy?

- a. Chloroplasts. b. Cell wall.
c. Nucleus. d. Mitochondria.

24. The control center of the cell which is responsible for cell division is

- a. nucleus. b. mitochondria.
c. cell membrane. d. Golgi apparatus.

25. Objects with less thermal energy have kinetic energy.

- a. more b. less c. the same d. no

26. All the following animals have bones in their bodies, except

- a. dogs. b. birds. c. insects. d. cats.

27. The body of is composed of one cell only.

- a. human b. bacteria c. a big tree d. an elephant

28. The artificial pacemaker is inserted into the of human body.

- a. legs b. chest c. neck d. brain

29. The heat of the Sun reach the Earth by

- a. convection. b. conduction.
c. radiation. d. condensation.

30. If the mass of a piece of ice is 50 gm. then its mass when it melts is

- a. 50 gm. b. 25 gm. c. 40 gm. d. 60 gm.

31. Stomach is composed of a group of different

- a. cells. b. systems. c. organs. d. tissues.

32. The energy is related to the motion of particles of matter.

- a. chemical b. potential c. light d. thermal

33. Most plants appear in color due to the presence of chlorophyll pigment in their cells.

- a. yellow b. blue c. red d. green

34. Materials..... on heating.

- a. expand b. contract c. compress d. do not change

35. In a dangerous situation, your eyes send the information to the to perform the suitable action.

- a. brain b. stomach c. lungs d. heart

36. Cardiac muscles are type of involuntary muscles which form the

- a. stomach. b. intestine. c. lungs. d. heart.

37. The smallest tiny structures that build up all living organism's bodies are

- a. systems. b. cells. c. organs. d. bricks.

38. Magnets can be made of

- a. copper. b. glass. c. iron. d. plastic.

39. The surrounds the cytoplasm and controls the substances that enter or leave the cell.

- a. cell wall b. nucleus
c. cell membrane d. mitochondrion

40. The is/ are responsible for cellular respiration.

- a. cell wall
- b. nucleus
- c. plasma membrane
- d. mitochondria

41. The surrounds the plant cell from outside and gives it a definite shape.

- a. nucleus
- b. cell wall
- c. cytoplasm
- d. cell membrane

42. The system controls the body temperature and blood pressure.

- a. digestive
- b. respiratory
- c. urinary
- d. endocrine

43. When you are stressed out, your increase(s).

- a. heartrate only
- b. blood pressure only
- c. bones' size
- d. heartrate and blood pressure

44. are microscopic filters found in each kidney.

- a. Glands
- b. Bladders
- c. Nephrons
- d. Blood vessels

45. The heartbeats in the system accelerates when feeling afraid.

- a. urinary
- b. nervous
- c. circulatory
- d. digestive

46. Sweat is excreted by the

- a. skin
- b. lungs
- c. heart
- d. kidneys

47. The generator produces energy.

- a. mechanical
- b. chemical
- c. light
- d. electrical

48. On heating wax, it will

- a. turn into solid
- b. melt
- c. freeze
- d. get cooled

49. All the following are liquids, except

- a. mercury
- b. water vapor
- c. food oil
- d. water

50. The boiling point of water is

- a. 50°C
- b. 30°C
- c. 0°C
- d. 100°C

51. energy is the energy of motion.

- a. Kinetic
- b. Light
- c. Sound
- d. Chemical

52. Molecules of water are packed tightly together in its state.

- a. solid
- b. liquid
- c. gaseous
- d. plasma

53. The liquid in a thermometer as the temperature increases.

- a. contracts
- b. expands
- c. disappears
- d. freezes

54. The main idea of the thermometer is to change the of a liquid by changing the temperature.

- a. mass b. weight c. color d. volume

55. Heat is a form of

- a. energy b. matter c. physical state d. metals

56. exist in both plant and animal cells.

- a. Cell wall b. Cell membrane
c. Chloroplasts d. Large vacuole

57. All the following are magnetic materials, except

- a. nickel b. steel c. iron d. copper

58. When water vapor it turns into water drops.

- a. melts b. evaporates c. condenses d. freezes

59. Humans are organisms.

- a. multicellular b. unicellular c. prokaryote d. simple

60. The is used to open and close the electric circuit.

- a. wire b. switch c. electric lamp d. battery

61. The is the building unit of the living organism's body.

- a. brick b. cell c. organ d. blood

62. When a bulb consists of three bulbs in a circuit is burned out, the other two bulbs turned off, then the bulbs must be connected in

- a. parallel b. series c. square d. non- consecutive

63. When an electric current flows through a wire, a/an field is produced around the wire.

- a. electric b. gravitational c. magnetic d. thermal

64. The generator changes the mechanical energy into energy.

- a. light b. electrical c. thermal d. magnetic

65. Digestion process starts in the

- a. stomach b. mouth c. esophagus d. large intestine

66. is the process of changing liquid into solid by cooling.

- a. Melting b. Freezing c. Evaporation d. Condensation

***(3) Complete the following sentences:**

1. Magnets attract some metals such as and
2. Heat will flow from the substance to the one.
3. Milk is a matter in state, while helium is a matter in state.
4. When two muscles work together to carry out a movement, one muscle while the other one
5. Materials that don't conduct electricity are called
6. We can use dye to make the nucleus of all cells more visible.
7. Bundles of muscles tissues are organized to form the
8. Cellulose makes up that found in cell.
9. is the building unit of living organism's bodies.
10. The electric circuit contains which is responsible for opening and closing the circuit.
11. is the process in which matter changes from liquid state to solid state.
12. materials slow down the heat transfer.
13. The plant cell has a definite shape because it has
14. Magnets attract some metals such as
15. The state of matter has indefinite shape and volume.
16. The heat of the Sun can transfer through space to the Earth by
17. The is the component of the cell that allows water to enter and exit the cell.
18. Gold and copper are considered materials as they do not attracted to magnet.
19. Living organisms that their bodies consist of one cell called
20. A process in which matter changes from liquid state to gas state is
21. There are three states of matter solid, and gas.
22. The system that responsible for getting rid of wastes in human is
23. The disease is one of the disorders of the endocrine system.
24. The temperature at which solid changes to liquid is known as point.
25. Electric circuits in houses are connected in way.
26. controls the substances that can enter or leave the cell.
27. controls all the cell activities such as cell division.
28. is a device that changes kinetic energy into electric energy.

*** (4) Complete the following sentences using the words below****1. (Insulator - Temperature - Evaporation - Diabetes)**

1. disease is one of the disorder of the endocrine system.
2. is a material in which electricity does not flow easily.
3. is a measure of average of kinetic energy of particles in any substance.
4. is the change of matter from liquid state to gas state by heating.

2. (diaphragm - parallel path - atom - thermal equilibrium)

1. The way of connecting electric bulbs in different branches is called
2. In case of, heat doesn't flow as the two objects have the same temperature.
3. When the muscle contracts, the lung takes in air.
4. The is the smallest building unit of matter.

3. (plastic - Copper - conductors - non-magnetic - cell membrane - cell wall)

1. Thermal materials allow heat to travel freely through them
2. Copper and will not attract to the magnet as they are materials.
3. The outermost layer of the plant cell is the while it is in the animal cell.
4. is not attracted to the magnet.

4. (colder - series – heartbeats - hotter - nucleus - kidneys)

1. The purify blood from the waste materials.
2. The is the main control center of the cell.
3. Heat transfers from a object to a one.
4. In a circuit, the electric current passes through only one path.
5. A pacemaker helps patients who have irregular

***(5) Put (√) or (X) :**

- | | |
|---|-------|
| 1. Thermometer is used to measure the temperature of materials. | () |
| 2. Plant cells and animal cells are completely similar in structure. | () |
| 3. In the parallel circuits, the electric current can flow in one branch. | () |
| 4. Water in dams are used to operate wind turbines. | () |
| 5. Hot water molecules have more kinetic energy than cold water. | () |
| 6. Copper and iron allow heat to travel freely through them. | () |
| 7. The force of gravity increases between an object and the Earth's surface when the distance between them increases. | () |
| 8. The electric devices in houses are connected in series circuits. | () |
| 9. Heart muscle is considered as an involuntary muscle. | () |
| 10.By decreasing temperature, the spaces between molecules of a substance decrease. | () |
| 11.Thermal conductors are good conductors of heat. | () |
| 12.Cell biologists are scientists who study rocks. | () |
| 13.Expansion and contraction of matter occur due to changes in temperature. | () |
| 14.Heat transfers between two objects that have the same temperature. | () |
| 15.Molecules of solids move faster than the molecules of liquids. | () |
| 16.Absorption of food occurs in the small intestine. | () |
| 17.All systems in the human body work together. | () |
| 18.Heart muscle is from voluntary muscles. | () |
| 19.Boiling point is the temperature at which liquid matter changes into gas. | () |
| 20.Plastic is an example for materials that resists the transfer of thermal energy. | () |
| 21.Matter changes from state to another state by cooling or heating. | () |
| 22.Electrical energy is a form of matter. | () |
| 23.The cell organelles float in the cytoplasm. | () |
| 24.When the heartbeats increase, the blood pressure decreases. | () |
| 25.When matter changes from one state to another, its mass doesn't change. | () |
| 26.Each animal cell has cell wall which is made up of cellulose. | () |

Science	First Term 2024/2025	Grade 6
27. Lung is an organ in the respiratory system.		()
28. A human can control the movement of blood in his body.		()
29. When the substance expands, its volume increases.		()
30. Plastic is made from chemical changes to some of the petroleum compounds.		()
31. The electric devices in houses are connected in series circuits.		()
32. Heat transfers from the cooler object to the hotter object.		()
33. In series circuits, the electric current can flow in different branches.		()
34. We can measure the temperature by using thermometers.		()
35. Matter can't be changed from one form to another.		()
36. If your body doesn't get rid of waste, you will be healthy.		()
37. When a liquid is cooled, it may change into gas.		()
38. Bacteria and horse are considered as multicellular organisms.		()
39. The heart is important in our body as it helps in food digestion.		()
40. No spaces are left between railroad tracks.		()
41. Magnets attract the non-magnetic materials such as iron, nickel and steel.		()
42. All systems in your body work together in an integrated way.		()
43. Both the heart and stomach are considered tissues.		()
44. Mitochondria are the part that is responsible for the cellular respiration.		()
45. The plant cell has a larger vacuole than that of the animal cell.		()
46. The magnet has two poles.		()
47. Electricity can't be related to magnetism.		()
48. Water flowing on a dam can be used to move the turbines of a generator.		()
49. The battery is the source of electric current in the electric circuit.		()
50. Nickel is attracted to the magnet as it is a non-magnetic material.		()
51. All substances have the same boiling point.		()
52. Particles inside water move faster than those of steam.		()
53. When water vapor condenses, it turns into a solid.		()
54. Freezing is the reverse process of melting.		()

Science	First Term 2024/2025	Grade 6
55. Wood is considered an insulator, while metals are thermal conductors.		()
56. Multicellular organisms consist of only one single cell as the plant cell		()
57. Heat transfers faster by decreasing the surface area of the substances.		()
58. Gravity is the force that pulls objects towards the center of the Earth.		()
59. A fridge is from the appliances that have a thermostat.		()
60. Generators change electrical energy into mechanical energy.		()
61. Bacteria are unicellular organisms.		()
62. Heat can't transfer through space.		()
63. It is safe to touch the electric wires which are coated with plastic.		()
64. Mitochondria power the cell with the needed energy.		()
65. You can control the involuntary muscles.		()
66. All the materials are good conductors of electricity.		()
67. Liquids expand by cooling and contract by heating.		()
68. The handle of an iron is made of plastic as it is a thermal conductor.		()
69. A metallic paper clips are electric insulators, while rubber is a conductor.		()
70. In parallel circuit, there are multiple routes for the electric current.		()
71. A Thermal energy is transferred in metals by radiation		()
72. Metals expand by heating and contract by cooling.		()

✱(6) Matching:

1.

A	B
1. Chloroplasts	a. they are muscles that move automatically and you can't control their movement.
2. Involuntary muscles	b. the change of state of matter from gas to liquid by cooling.
3. Electric circuit	c. stores nutrients, water and waste materials.
4. Condensation	d. they are responsible for making photosynthesis process inside plant cells.
5. Sap vacuole	e. it is a closed path through which electrons move.

1-

2-

3-

4-

5-

2.

A	B
1. Electricity	a. is a closed path through which electrons move.
2. Electric conductors	b. are materials that electric charges flow through.
3. Electric circuit	c. are materials through which electrons can't flow.
4. Electric insulators	d. is a form of energy.

1-

2-

3-

4-

3.

A	B
1. Battery	a. is a matter that has fixed shape and volume.
2. Iron	b. heat is transferred between molecules of boiling water.
3. Muscle cells	c. is a source of electric charges in the electric circuit.
4. By convection	d. are cells in the form of long fibers to allow movement.

1-

2-

3-

4-

4.

A	B
1. Iron	a. are responsible for the cellular respiration.
2. Cell membrane	b. is a magnetic material that conducts electricity
3. Cell wall	c. supports the plant cell from outside.
4. Mitochondria	d. controls the passing of substances into or out the cell

1-

2-

3-

4-

5.

A	B
1. Circulatory system	a. allow body movement.
2. Musculoskeletal	b. releases hormones into the body
3. Endocrine system	c. breaks food into molecules that the body absorbs
4. Digestive system	d. transports gases, hormones and nutrients through the body.

1-

2-

3-

4-

6.

A	B
1. Cytoplasm	a. is a non-magnetic material that conducts electricity
2. Thermometer	b. all other cell parts float in it.
3. Copper	c. is a muscle that contracts to let oxygen gas enter the body
4. Diaphragm	d. is the measuring tool of temperature

1-

2-

3-

4-

7.

A	B
1. Heart	a. is the way through which Sun heat reaches the Earth.
2. Plastic	b. are used to slow the flow of electrons through a circuit.
3. Radiation	c. is used to make the electric iron handle.
4. Electric resistors	d. is an organ of the circulatory system that is made up of a involuntary muscle.

1-

2-

3-

4-

★(7) Give reason:

1. Heart muscle contracts and relaxes without stopping.

.....

2. Plant cell can make photosynthesis process.

.....

3. Mitochondria act as electrical power stations in cities.

.....

4. Some electric circuits contain resistors.

.....

5. Undigested food become solid wastes inside the large intestine.

.....

6. The electric circuit is considered as a system.

.....

7. The human body is considered an electric conductor.

.....

8. Cats are considered as multicellular organisms

.....

9. The heart has a natural pacemaker.

.....

10.Cobalt and nickel are considered as magnetic materials.

.....

11.You feel heat, when you touch a metal spoon placed in a hot cup of tea.

.....

12.The plant cell has a definite shape, but the animal cell doesn't.

.....

13.Mitochondria have an important role in the cell.

.....

14.Animals can't make their own food.

.....

15.Cooking pots are made of metals.

.....

16.The excretory system keeps the body healthy.

.....

✱(8) What happens to ... ?

1. The brain of cyclist when he sees a dangerous situation.

.....

2. Pancreas doesn't make its function correctly.

.....

3. The electric circuit doesn't contain switch.

.....

4. The level of alcohol inside a thermometer if we put it in cold water.

.....

5. Absence of expansion joints in the designed bridges.

.....

6. You touch a hot cup of tea. (according to the transfer of heat)

.....

7. A person touches non insulated electric wire through which an electric current passes.

.....

8. Your body doesn't get rid of waste.

.....

9. Molecules' movement of a hotter substance after mixing it with a cooler substance

.....

10.The animal cell is surrounded by cell wall

.....

11.To the human body when the heartbeats increase during danger.

.....

12.If you heat a piece of butter

.....

13.If the switch is closed in the electric circuit.

.....

✱(9) Correct the underline

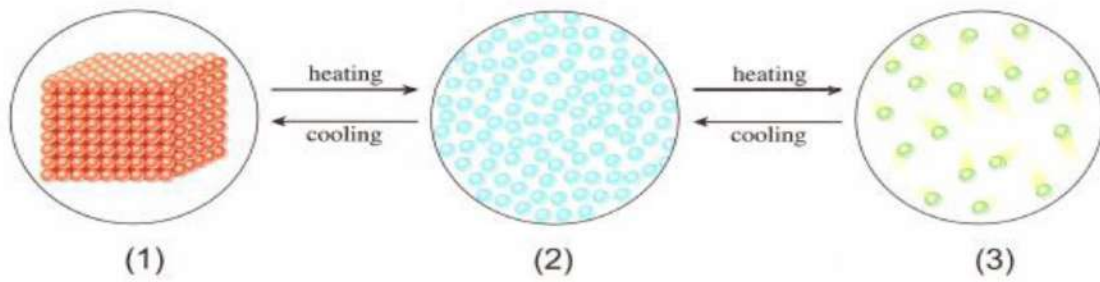
1	When the temperature of solids <u>increases</u> , their volume decrease	(.....)
2	Friction <u>increases</u> the speed of moving objects.	(.....)
3	The electric <u>current</u> is the path for electricity that consists of many components.	(.....)
4	We can see the cells of all living organisms with the <u>naked eye</u>	(.....)
5	Substances in <u>gas</u> form have the least thermal energy.	(.....)
6	Magnetism is a pulling or pushing force, while gravity is a <u>pushing</u> force only.	(.....)

✱ (10) Cross odd word:

- Chloroplast - Cell wall - Trachea - Sap vacuole. (.....)
- Iron - Nickel -Aluminum - Cobalt. (.....)
- Conduction - Convection - Friction - Radiation. (.....)
- Air - Copper - Wood - Glass. (.....)
- Urine - Oxygen gas - Carbon dioxide - Sweat. (.....)
- Oil - Milk - Iron – Vinegar (.....)
- Stomach - Heart - Esophagus – Mouth (.....)
- Plastic - Rubber - Iron – Wood (.....)
- Cloth - Iron - Plastic - Wood (.....)
- Convection - Conduction - Freezing – Radiation (.....)
- Nickel - Steel - Iron – Copper (.....)
- Steam - Ice - Rocks – Glass (.....)

☀ (11) Problems:

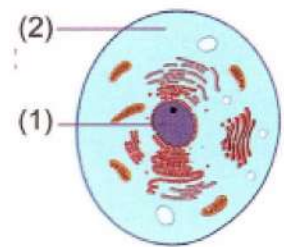
1. Look at the following figure then answer the questions:



1. The process of changing matter from state (3) to state (2) is called
2. What happens to the speed of molecules when the matter is changed from state (1) to state (2)?

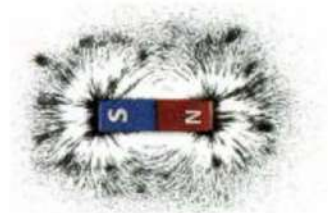
2. Study the opposite figure, then answer the questions below:

1. Number (1) represents:
2. Number (2) represents



3. Look at the opposite figure then answer:

The magnet is made of and it is surrounded by an area called



Model Answer

*(1) Write the scientific term:

1. Cell	10. Endocrine system	19. Cell membrane	29. Respiratory system
2. Involuntary muscle	11. Electric generator	20. Electric conductor	30. Electric circuit
3. Boiling point	12. Convection	21. Insulin	31. Galvanometer
4. Insulator	13. Artificial pacemaker	22. Cell wall	32. Thermal energy
5. Solid	14. Conduction	23. Magnetic field	33. Freezing
6. Magnetic material	15. Calorie	24. Thermometer	34. Evaporation
7. Pancreas	16. Gas	25. Multicellular	35. Radiation
8. Electric current	17. Mitochondria	26. Microscope	
9. Organ	18. Nucleus	27. System	
		28. Nucleus	

*(2) Choose the right answer:

1. C	12. B	23. D	34. A	45. C	56. B
2. C	13. C	24. A	35. A	46. A	57. D
3. B	14. D	25. B	36. D	47. D	58. C
4. C	15. C	26. C	37. B	48. B	59. A
5. B	16. B	27. B	38. C	49. B	60. B
6. C	17. A	28. B	39. C	50. D	61. B
7. C	18. C	29. C	40. D	51. A	62. B
8. B	19. B	30. A	41. B	52. A	63. C
9. B	20. B	31. D	42. D	53. B	64. B
10. B	21. D	32. D	43. D	54. D	65. B
11. A	22. B	33. D	44. C	55. A	66. B

*(3) Complete the following sentences:

1. Iron – nickel	8. Cell wall – plant	15. Gas	22. Excretory system
2. Hotter – colder	9. Cell	16. Radiation	23. Diabetes
3. Liquid – gas	10. Switch	17. Cell membrane	24. Melting
4. Contract - relax	11. Freezing	18. Nonmagnetic	25. Parallel
5. Insulators	12. Insulators	19. Unicellular	26. Cell membrane
6. Methylene blue	13. Cell wall	20. Evaporation	27. Nucleus
7. Organs	14. Iron	21. Liquid	28. Generator

*(4) Complete the following sentences using the words below

1. Diabetes	2. Insulator	3. Temperature	4. Evaporation
1. parallel path	2. thermal equilibrium	3. diaphragm	4. atom
1. conductors	2. plastic - non-magnetic	3. cell wall - cell membrane	4. Copper
1. Kidneys	2. Nucleus	3. Hotter – colder	4. Series
1. Heartbeats			

*(5) Put (✓) or (X) :

1. (✓)	16. (✓)	31. (X)	46. (✓)	61. (✓)
2. (X)	17. (✓)	32. (X)	47. (X)	62. (X)
3. (X)	18. (X)	33. (X)	48. (✓)	63. (✓)
4. (X)	19. (✓)	34. (✓)	49. (✓)	64. (✓)
5. (✓)	20. (✓)	35. (X)	50. (X)	65. (X)
6. (✓)	21. (✓)	36. (X)	51. (X)	66. (X)
7. (X)	22. (X)	37. (X)	52. (X)	67. (X)
8. (X)	23. (✓)	38. (X)	53. (X)	68. (X)
9. (✓)	24. (X)	39. (X)	54. (✓)	69. (X)
10. (✓)	25. (✓)	40. (X)	55. (✓)	70. (✓)
11. (✓)	26. (X)	41. (X)	56. (X)	71. (X)
12. (X)	27. (✓)	42. (✓)	57. (X)	72. (✓)
13. (✓)	28. (X)	43. (X)	58. (✓)	
14. (X)	29. (✓)	44. (✓)	59. (✓)	
15. (X)	30. (✓)	45. (✓)	60. (X)	

***(6) Match:**

1.	1.	d	2.	a	3.	e	4.	b	5.	c
2.	1.	d	2.	b	3.	a	4.	c		
3.	1.	c	2.	a	3.	d	4.	b		
4.	1.	b	2.	d	3.	c	4.	a		
5.	1.	d	2.	a	3.	b	4.	c		
6.	1.	b	2.	d	3.	a	4.	c		
7.	1.	d	2.	c	3.	a	4.	b		

***(7) Give reason:**

- To allow the heart pumps the blood carrying oxygen to all the body cells.
- Due to the presence of chloroplasts in the plant cells.
- Because mitochondria provide the cell with its needed energy.
- Because resistors are used to slow the flow of electrons through an electric circuit to avoid the damage of its other components.
- Because large intestine (colon) absorbs most of water from the undigested food.
- Because the electric circuit is a path for electricity that consists of many components that work together.
- Because the human body contains a lot of water which is good conductor of electricity.
- Because the bodies of cats consist of many cells.
- To produce electrical currents that are send out through the heart, causing the heart to contract.
- Because they are attracted to the magnet.
- Because the heat transfers from the metal spoon to the hand by conduction.
- Because the plant cell is surrounded by a cell wall while animal don't have.
- Because mitochondria provide the cell with its needed energy.
- Due to the absence of chloroplasts in the animal cells.
- Because metal is thermal conductor that allow thermal energy to transfer through.
- Because the excretory system collects the waste materials produced by cells.

***(8) What happens to ... ?**

- The brain sends a signal to the muscles that contract to face danger.
- The person will be infected with diabetes disease.
- We can't open or close the circuit easily.
- The level of alcohol will decrease.
- Buckling of bridges occurs as a result of expansion at high temperatures.
- Heat transfers from the cup to the hand.
- The electric current will flow through his body and he will be shocked by electricity.
- The body will get sick.
- The movement of molecules of the hotter substance becomes slower after mixing.
- The animal cell will have a definite shape.
- The heart pumps more blood to the muscles.
- It changes from solid state into liquid state.
- The electric current flows through the circuit.

***(9) Correct the underline:**

- | | |
|-------------|---------------|
| 1. Decrease | 4. Microscope |
| 2. Decrease | 5. Solid |
| 3. Circuit | 6. Pulling |

***(10) Cross odd word:**

- | | | |
|-------------|-----------|--------------|
| 1. Trachea | 5. Oxygen | 9. Iron |
| 2. Aluminum | 6. Iron | 10. Freezing |
| 3. Friction | 7. Heart | 11. Copper |
| 4. Copper | 8. Iron | 12. Steam |

***(11) Problems:**

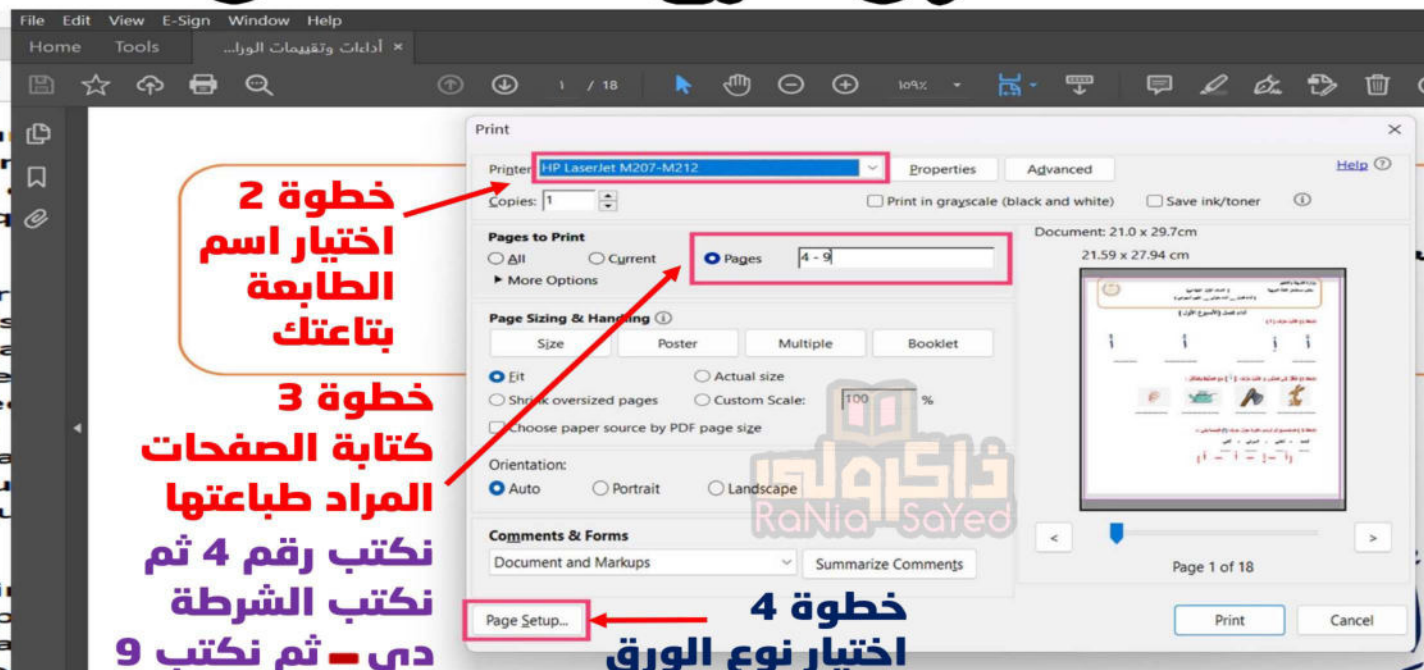
- | | |
|--------------------------|-------------------------|
| 1. Condensation | 2. Its speed increases. |
| 2. Nucleus | 2. Cytoplasm |
| 3. Iron – magnetic field | |

كيفية طباعة صفحات معينة من ملف معين

مثلا ازاي نطبع الصفحات من صفحة 4 الى صفحة 9



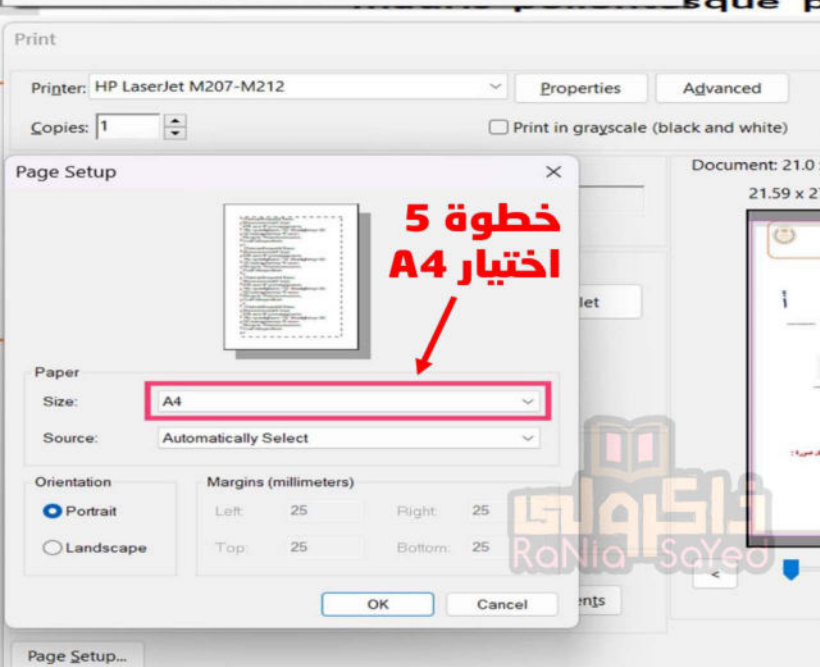
خطوة 1



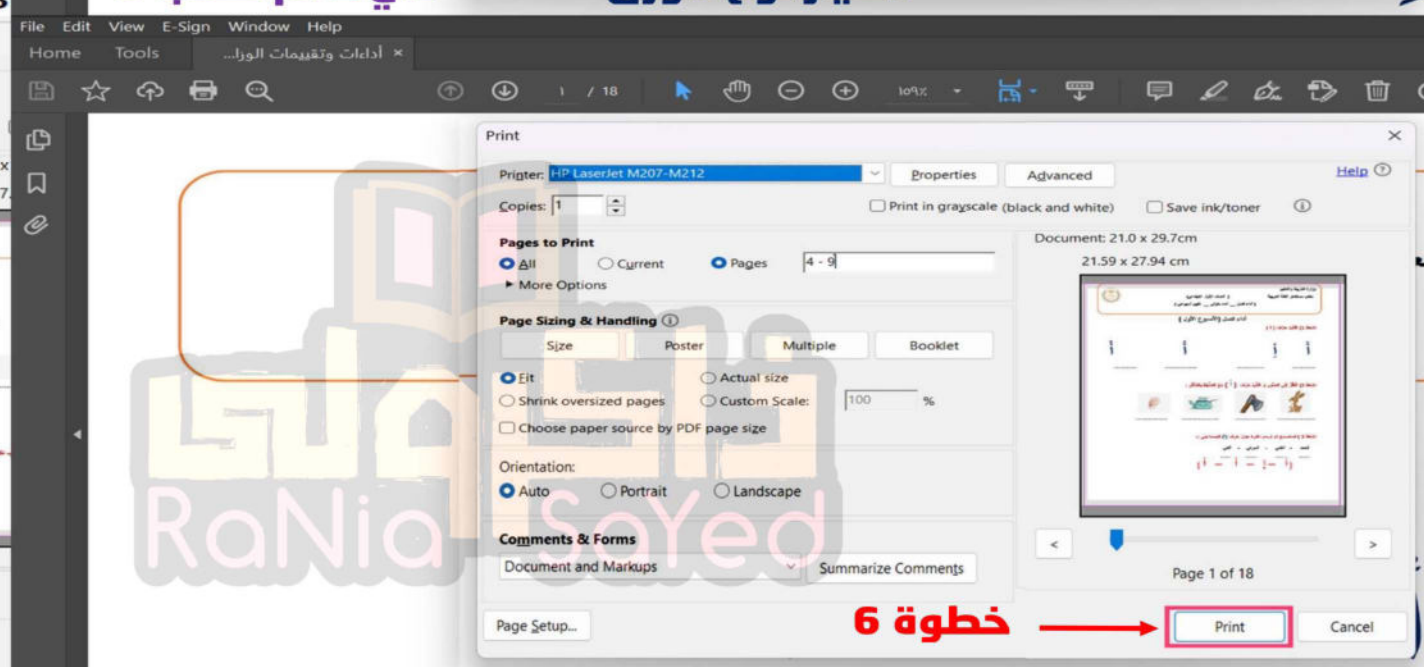
خطوة 2
اختيار اسم
الطابعة
بتاعتك

خطوة 3
كتابة الصفحات
المراد طباعتها
نكتب رقم 4 ثم
نكتب الشرطة
دي - ثم نكتب 9

خطوة 4
اختيار نوع الورق



خطوة 5
اختيار A4



خطوة 6